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Students' Definitions of Academic Success

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STUDENTS' DEFINITIONS OF ACADEMIC SUCCESS

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Academic success has not been well defined consistently, and when definitions have been proposed (e.g. Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006 ; York, Gibson, & Rankin, 2015), they are not always measured consistently. Is it good grades (Parker, Summerfeldt, Hogan, & Majeski, 2004), and if so, what constitutes a good grade and what should be graded? Is it understanding the material, and if so, is understanding shown by simply completing the academic tasks (Choi, 2005)? Is it perseverance and grit (Tang, Wang, Guo, & Salmela-Aro, 2019), and if so, why do many other definitions and views focus so much on grades? Alternatively, and perhaps even more importantly, how do *students* define academic success? By being able to better understand how students view and define academic success, educators can be better prepared to help students succeed within the classroom by better providing them with opportunities and feelings of success rather than defeat. In this research I investigated this problem of practice using qualitative methods through a case study of students within mathematical classroom settings.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

As a student, I always struggled with a lack of a consistent definition of academic success between all educational stakeholders (e.g. students, parents, teachers, administrators, etc.). It seemed like some teachers would focus on the achievement of good grades, while others would focus on the ability to understand and apply the material being taught. Now as an educator, I find myself continuing to struggle with the issues that arise from these inconsistencies. I regularly complete 'check-ins' with my students throughout the semester in which I ask my students if they know where their grade stands, and if they like where their grade stands in my class. From these, albeit brief, conversations with my students, I found myself wondering if, and to what extent, I am intentionally or unintentionally promoting the view of success solely through the measurement of grades. Because of this, I found myself questioning if there is any way that we can come to a consensus within the various definitions that are held by various educational stakeholders to make sure that we are all using the same definition and measurement when discussing academic success.

Unfortunately, I found it unlikely that any such consensus could be found in a single study, which brought up the question of which stakeholder to focus on; of which the clear answer was found to be the students themselves. My lack of understanding of how students define success caused me to have instances of misunderstandings with students not only during my check-ins, but also through the things that I would say and do within my classroom. As a classroom teacher, I try to do as much as I can for my

students but continue to wonder what I can and should do to help my students succeed within my classroom. Only by knowing how students themselves define academic success can I do my best as an educator to help them meet this definition to find success within my classroom. This study allowed me to analyze student descriptions and definitions of academic success with the goal of better understanding how I, as an educator, can better create a student-centered learning environment in which I can assist students to achieve success in my classroom and to also help prepare them for whatever college or career plans they may hold.

Personal Views on Success

Without understanding my own personal views of academic success, I would not be able to help my students understand their own views of academic success. Through discussing my views and experiences, I hoped to be able to apply the ideas of 'epoche' and 'bracketing' of removing myself as the researcher from the data collected as much as possible to assist in having an untainted account of my participants' views (Shufutinsky, 2020). To put my own views of academic success into perspective, the following are various aspects that have been used to define academic success, both personally and in previous research.

I have always used grades as one of my main measurements of academic success for myself and my students (see also Parker et al., 2004 for an example of research connecting grades with academic success) and I have always strived for good grades and taken pride when I earned good grades. As an educator, the idea of grading has become much more complicated with grades being inflated or impacted by 'grading behaviors'

instead of grading knowledge and understanding gained by students. It is also tricky as grades also are impacted by cultural biases, prior knowledge, prior experiences, and students' abilities to quickly grasp the concepts being taught rather than their understanding the material taught over longer periods of time. These connections between grades and other outside factors (i.e. cultural biases, prior experiences, etc.) have caused the idea of 'teaching to the test', after which students can sometimes simply discard this knowledge. Grades can also be greatly influenced by various factors such as testing ability/anxiety, the classroom environment, the content being taught (i.e. mathematics vs. physical education) and other countless intangible factors. Even with these issues with grades, part of my definition of academic success, both personally and professionally, factor in grades as a measure of achievement and success.

Going beyond the goal of simply earning grades, an increase in student knowledge and understanding is a goal of our educational system, often with the ideals of having a more knowledgeable population. It can be argued that student understanding can and should be used more than simply grades as a measure of success and achievement, but understanding is as difficult as grades to fully measure at times (Choi, 2005). This is becauseas student understanding is often represented by the grade. Many educators, myself included, have difficulties identifying student understanding without the use of quizzes, tests, etc. that may or may not be graded to be entered into the grade book. There are obviously ways to check for student understanding without having to grade every single 'assessment' of their knowledge and understanding, but there is some resistance for teachers to do work that "is not going in the grade book" and giving it the time that it deserves.

I even find myself regularly asking the question as to whether or not the given assignment, quiz, test, etc. is actually allowing the students to show their learning and understanding. Within the world of mathematics there are often things that are taught formulaically, without any need to understand the process, just simply memorize and apply the formula. This causes me some concern as I wonder how often I am teaching my students in a similar manner, with little to no regard for actually learning and understanding the content. I believe that the grade is meaningless if the students did not learn anything or gain any further understanding of the content in our time together in my classroom.

Not only do I want my students to gain knowledge and understanding of the content I am teaching, but I am also wanting my students to continue to learn and grow in perseverance, which I believe is a very important trait that schools can and should instill in students as we prepare them for the future. The word “grit” has become a fairly popular topic in the world of education recently, which has been defined as “having resilience in the face of failure” (Perkins-Gough, 2013). Through its emergence as a trait to teach students, I have come to view perseverance as something that I use in my personal definition of academic success. Learning is not always easy for students, but the ability to persevere and not give up through the process is something that I have used as a measurement of success, partially because of its growing popularity in recent research.

Not all of my students are 'academic' in nature, having such a strong personal focus on academics as I have had all of my life. Now this does not mean that they are not capable of having great success in the world of education, but instead that their life goals and focus are not academics but other things (ie. athletics, current and future

employment, etc.). Some of them will pursue graduate degrees like I have, but not all, and it is also possible that some of my students may not pursue undergraduate education depending on their goals. Regardless of what their goals are after they leave my classroom and graduate, I am hoping that I can instill in them an attitude of perseverance and the ability to not give up, even in the midst of difficult challenges. For some of my students, math is their 'hardest' subject to learn because of their past experiences and mathematics identities. As a mathematics teacher, I count it a success when they are willing and able to work hard and to not give up, thus making perseverance a part of my views of success within my own mathematics classroom. Through all of this, I have always viewed and defined success personally through a combination of the goals of good grades, increased knowledge and understanding, and persistence and effort to work hard to achieve those goals.

Mathematics Identities

As a mathematics teacher, I have often heard phrases similar to the following: “I have never been good at math,” or “I have never been a math person,” from both students and parents alike. In my experiences, most of my students in my College Algebra courses tend to have lower personal views of mathematics in general, or in many instances have lower views of themselves as students and their abilities to learn and do mathematics. Many of these students have either been told by others, or in some instances have just convinced themselves, that they will not succeed with more ‘advanced’ mathematics courses such as Pre-Calculus and beyond. On the other hand, I also teach AP Statistics, which is often taken by students who have had much more

'success' in past mathematics courses, and would thus view math as less of a challenge. It is within these setting that I must first understand my own views of mathematics and mathematics identities to help better understand how the mathematics identities of my students impact them and their views of academic success within my classroom.

Personally, I always have described myself as somebody to whom learning and doing mathematics 'came easy.' Mathematics always made sense to me, and I always found 'success' in learning and performing in mathematics classes, which some would use to describe me as a 'smooth track learner' of mathematics (McCulloch, Marshall, Decuir-Gunby, & Caldwell, 2013). This is not surprising as many mathematics teachers, from my experiences, similarly had more positive views of mathematics and their mathematical identities. In contrast, research has found that many elementary teachers chose the elementary classroom specifically to avoid the teaching of mathematics and mathematical concepts to which they are, or at least feel, uncomfortable (e.g. Dodd, 1992; Leavy & Hourigan, 2018). In light of this, I find myself trying to come to terms and better understand some of the tension between myself, students, and parents with regards to views and definitions of 'success' in my mathematics classroom.

There has been an increase in research with many studies recently in mathematics education focusing on the idea of mathematical identity. It has been argued that exploring how students identify with mathematics can assist teachers and researchers to better understand how the relationship between student and the mathematics subject is not fixed, but develops over time (Walls, 2009). Unfortunately, there have been many discrepancies between mathematical identities of male and female students, which is an issue with our ever increasingly technological world and society (Cribs et al., 2015;

Froschl & Sprung, 2016). I am forced to ask myself whether or not students' views of academic success in the mathematics classroom are tied to their mathematical identities, whether they be internally or externally constructed, and how this impacts my work as a teacher of mathematics, which brings me to my problem of practice.

Problem of Practice

Entering the Carnegie Program for the Educational Doctorate (CPED), my initial thoughts regarding my problem of practice were fairly varied, including: the blended learning environment, technology in the mathematics classroom, mathematics as a language and how it impacts student learning and achievement in mathematics, and defining academic success. After many long months and internal debates, I decided that the idea of defining academic success would best serve me in the present and in the long-term as an educator. This is also fitting as it is the one topic that I find to be most of a problem of practice, an issue seen in my classroom, and has also been one of my main philosophical questions both inside the world of education but also beyond. Everybody wants to have success in life, but if we are comparing apples and oranges, how meaningful is our comparison of 'success'? Similarly, in the classroom, does it really matter what other people think about 'success', or lack thereof, except for the students views themselves?

York et al. (2015), in analyzing and slightly modifying Kuh et. al's (2006) definition proposed a definition of "academic success as inclusive of academic achievement, attainment of learning objectives, acquisition of desired skills and competencies, satisfaction, persistence, and post-college performance." Though this

definition may seem succinct, as previously stated, how is persistence measured? How is attaining learning objectives measured and defined? Who decides what is deemed a 'desired skill', and how can we measure the acquisition of these skills? These questions also fall on top of the looming question regarding the focus on college and 'post-college performance'. Even though there has always been an unspoken, and sometimes spoken, emphasis in the world of education of proceeding to college and completing a degree program, more recently there has been a shift to college *and career* readiness. This begs the question of how can college and success in college be an integral aspect of defining academic success when we find a percentage of our students not heading in that direction?

As an educator, I have constantly struggled with finding a balance in promoting both college and career readiness as I know that I have students in my classroom that are heading down these different paths. This is especially true in my College Algebra courses that form a large basis for my participant selection as many of these students describe themselves as never having been 'good' at math and thus see themselves as not a 'math person', but they still want a fourth year of math in preparation for college or career goals. I recognize, of course, that such a blanket statement is wide open to various levels of scrutiny, but from my conversations with my students, that is one of the prevailing thought processes of many of my past and current students. Whether this statement is true for all students or not, it brings up the relevance of investigating and incorporating the ideas of mathematics identities with the current study.

My conversations with my students have caused me to realize that I may be promoting the grade as the only, or main, mark of success within my classroom. In a

world of the pressures of the ACT test and the constant striving for specific GPA levels and class ranks, I feel that education has started to shift from the goal of student learning. I am not trying to say that having good grades, a high GPA, high ACT scores, etc. are bad or wrong, but I find myself questioning whether this should be the focus of our educational system and what effect this is having on our students in our classrooms. It will also be interesting to see how the educational landscape adjusts as some colleges and universities are no longer requiring different tests like the ACT in their admission decisions. Alternatively, and perhaps even more importantly, since the students are the ones that we are trying to prepare for the future, how do students describe and define academic success for themselves for us to better establish learning environments that foster such success?

The need to better understand students' views and definitions of academic success seems to be more relevant now than it ever has, especially in light of being better prepared to adjust to the changing landscape of education in our ever-changing world. To address my problem of practice, I proposed a study in which I sought to better understand how students define academic success and to help my students better understand their thoughts and definitions of academic success themselves.

To this end, the research questions that guided my study included:

1. How do students personally define their own academic success?
    a. In what ways do internal factors (e.g. mathematics identity, intrinsic motivation and personal goals) influence students' definitions and understanding of academic success?

b. In what ways do external factors (e.g. parents, teachers, other students, etc.) influence students' definitions and understanding of academic success?
c. In what ways do classroom environmental factors (e.g. the teacher, classmates, etc.) influence students' definitions and understanding of academic success?

Limitations of the Study

There were limitations to the study that must be acknowledged. The first of these came from the potential influence of my presence as both educator and researcher within the classroom environment(s) in which my student participants were learning. It is possible that my presence as both educator and researcher may have impacted their decision to participate in the study and participants may have felt the need to provide 'positive/desired' answers in their responses. In attempts to combat any potential issues that would arise from this, I was in constant communication with my school's administration to insure levels of checks and balances built into the study to minimize, and hopefully eliminate, any unintended pressure on my student participants. With regards to students feeling pressured to participate in the study, as I was their teacher who had control over their grade, only included prior students that were no longer in my classes during the data collection phase of my study.

Another limitation of the study was the small sample size. As it was meant to be a case study, I planned on a sample size of 12-25 students from my previous mathematics classes in an attempt to synthesize their responses to create a 'definition' of academic

success solely from the student view. Though the sample size was not an issue for the methodology chosen for this study, it may make it difficult to generalize my findings. That being said, this study may eventually be adapted and replicated in different settings with larger sample sizes to help generalize the findings. In and of itself, this was not a major limitation as this study was intended for me to gain insight into my problem of practice to better allow me to understand how my students, in our specific school/district/city define academic success, especially in the mathematics classroom.

Significance of the Study

Without knowing and understanding how students define academic success, educators and other stakeholders in education will simply continue to use and encourage their own definitions of success onto students, possibly widening the gap between us as students and educators. This study was intended to help 'bridge the gap' between these various stakeholders in education through an increased understanding of the students' views, and in doing so, may help remove some of the frustrations that educators feel when students 'don't succeed' – at least according to their own definition(s). Beyond this immediate implication of the study, there are other practical and future implications.

First, though academic success has been a constant topic of research within the field of education, very few, if any, studies currently exist that focus on the students' perspectives and student definitions of academic success. Because this study has the focus on students' definitions, my research will hopefully continue to build upon the previous research to help further students' academic success and achievement. I am also hopeful that this study will provide a new spark to help further similar research into

students' views and opinions of academic success in various settings. In my own classroom setting, this study will allow me to better understand my students' views, along with a better understanding of how various internal and external factors, myself included, can have an impact. Student-focused learning environments will also be able to continue to grow as educators adjust the learning environments to foster and promote academic success through knowing and understanding how students define academic success.

Moving Forward

The lack of a constant and consistent definition of academic success has been troublesome for many stakeholders in the world of education for some time. As an educator, I am constantly finding myself coming face-to-face with these inconsistencies of definitions and the aftermath of various views of success and the related expectations that students face, from both internal and external sources. Without a better understanding of how students define academic success for themselves, it is likely that educational stakeholders will continue to feel frustrations when their expectations and views of 'success' are not accepted and become reality for all of our students. Our jobs are to help the students learn and succeed not only in the classroom, but to also prepare them for what comes next in their lives, whether it be college or career. By helping them identify and achieve 'success' in academics, we can also continue to challenge and encourage our students to succeed outside of these educational settings. As such, this study attempted to understand how students define academic success; and thus, this study has the potential to contribute new knowledge to the field and may even set the stage for similar studies within other content areas.

CHAPTER 2

LITERATURE REVIEW

Academic success has never been consistently defined, and even when it has been defined (e.g. Kuh et. al, 2006 ; York et al., 2015), these definitions are not able to be easily measured consistently. Much research has proposed various predictors of academic success, many of which are also not easily measured or measured consistently. One of these important influencers of academic success has been the classroom environment, which is important to understand as the blended learning classroom environment is one in which some of the student participants may find themselves participating in. Within the mathematics classroom, views of success have changed over time from focusing on abilities to calculate quickly and correctly to a more recent focus on taking risks, increasing conceptual understanding, and collaboration. As will be shown, much of the previous research has not been student-centered with focusing on students' definitions and views of academic success, thus providing a void for the current research to, hopefully, fill.

Mathematical identity has also become a large focus of previous research and various aspects of mathematical identities have been proposed in previous research that will be discussed in the sections that follow. Though there is a lack of clear, consistent definitions of mathematical identity (Sfard and Prusak, 2005), others have discussed possible definitions and analytical frameworks that can be used to describe and define mathematical identities (e.g. Cobb, Gresalfi, & Hodge, 2009; Varela, Martin, & Kane, 2012). Previous research has discussed the multi-faceted nature of mathematical identity

pointing to the idea that identity is adjustable and can be amenable (e.g. Lynch et al., 2020). As such, identity has been viewed through a lens focusing on the interactions between individuals themselves (Lerman, 2001) and through a lens focusing on the larger socio-political context (Stinson & Bullock, 2012). Mathematical identity has been found to be impacted by access of educational opportunities (Esmonde, 2009), and is thus tied to academic success, which can be impeded by marginalization and lack of access in education (Ruef, 2020).

To better understand the framework on which this current study builds, one must understand previous research regarding academic success and mathematical identities. Some of this previous research will be discussed in the sections that follow to help form the base for the current research to build upon.

Academic Success

Academic success and academic achievement have never been well defined as there are many different aspects that can and have been used by various stakeholders (e.g. students, teachers, parents, administrators, etc.) in their various definitions and descriptions of academic success. It is important to recognize that each of these groups of stakeholders have different ideas of what it means to achieve academic success which can cause tensions between these various groups of stakeholders. Much of the previous research that has focused on defining and describing academic success has lacked in having a focus on the students' own views and beliefs. Kuh et. al (2006) defined academic success as including a combination of academic achievement, engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills

and competencies, persistence, attainment of educational outcomes, and post-college performance. Almost a decade later, York et al. (2015) provided a very similar definition of academic success, but even within these definitions, there are many facets used to define success, and many of these aspects are difficult to measure consistently. Even when academic success has been defined and can be measured, great inequities have been found to exist in providing access for all students to academically succeed (e.g. Diemer, Marchand, McKellar, & Malanchuk, 2016).

Most would agree that students having an understanding of the material being taught would constitute academic success, but the challenge is how one measures understanding. The idea of 'understanding' is often used in contrast to the use of grades to display success within the classroom environment, but there remains a tension in the fact that understanding is often measured solely by grades or some other similar performance measurement. The idea of grades has played a large role in the discussion of academic success as some researchers have argued that academic success comes from college GPA and graduation rates, which have been found to be predicted by standardized test scores and high school GPA (Atkinson & Geiser, 2009; Westrick, Le, & Robbins, 2015). In general, student academic success has often been measured either as acute academic performance such as grades and/or continuous academic performance such as persistence and retention (Bloemer, Day, & Swan, 2017; Connolly, Flynn, Jemmott, & Oestreicher, 2017). That being said, as educators, we all know that academic success goes well beyond earning 'good grades', as has been seen in the previous definitions proposed and used.

Regardless of the definition of academic success that is used, it has been found that socioeconomic status impacts both education and the attainment of education (Annalakshmi, 2019), thus impacting students' academic success and achievement. Unfortunately, even though there have been great strides taken to help provide opportunities for education, we continue to live in a society where inequalities greatly impact not only opportunities but also students' abilities to attain academic achievement and success. Not only have inequities been found with regards to minorities, there have also been differences in academic success found between genders (Voyer & Voyer, 2014), especially in the mathematics classroom (Froschl & Sprung, 2016). To address and eventually overcome these inequities, one must first better understand what is meant by academic success to help insure that all students are given opportunities to academically succeed. A number of predictors of academic success have been advanced in previous research, including but not limited to: student engagement and motivation, the role of the teacher and the classroom environment, and self-regulated learning (SRL) (de la Fuente, Zapata, Peralta, & Lopez, 2014; Flynn, 2014; Mary, Calhoun, Tejada, & Jenson, 2018; Van Rijsewijk, Oldenburg, Snijders, Dijkstra, & Veenstra, 2018; Vanthournout, Gijbels, Coertjens, Donche, & Van Petegem, 2012; Zhao & Kuh, 2004). Previous research on these predictors will be discussed in further detail in the sections that follow to better understand the foundation for this current research.

Student Engagement and Motivation

Two of the predictors of academic success that have been identified in previous research are student engagement and student motivation (e.g. Flynn, 2014; Vanthournout

et al., 2012). Students that are motivated, whether intrinsically or extrinsically, are more generally engaged in the classroom environment, causing these variables to be interconnected. To assist in increasing academic success for all students, it is important to understand how engagement and motivation have an impact.

Though most would say that it is easier to identify non-engagement, student engagement can be a difficult variable to define and measure. Is student engagement defined as a student that is paying attention? A student that is taking notes? A student that is participating? Or is it something completely different? Regardless of the definitions and descriptions that researchers use, distinctions between engagement and involvement have been discussed in literature (e.g. Bowden, 2009; Brodie, Hollebeek, Juric´, & Ilic´, 2011). In discussing the relationship between engagement and involvement, Astin (1984) defined and measured student involvement as the amount of energy, both physical and psychological, that the student devotes to academic experiences. This definition becomes difficult to measure as it can be difficult to ascertain how much energy students are putting forth in any given academic setting. It can also be difficult to distinguish between passive involvement and active involvement, which is where engagement comes in.

According to Mollen and Wilson (2010), student engagement goes beyond involvement including an active, behavioral dimension which is often depicted through actual interaction between engagement objects and subjects. Skinner and Belmont (1993) similarly described student engagement behavior in the learning environment as occurring when students are actively participating in the learning and exert effort and concentration towards the learning tasks at hand. It is important to understand student

engagement when trying to discuss past research on academic achievement as there has been found a mediating role of engagement with achievement, grades, and other skills, such as critical thinking (Ackerman, Gross, & Perner, 2003; Reyes, Brackett, Rivers, White, & Salovey, 2012). Understanding the positive impact that engagement can have on student academic success and achievement, Zhao and Kuh (2004) have found that what Martin and Ertzberger (2013) later described as "here and now learning" can have positive effects in increasing student satisfaction and student engagement. Similar to the potential issues with measuring and defining student involvement, it is also important to recognize that there is a difference between student engagement and perceived engagement.

Just as engagement is difficult to measure, perceived engagement can also be difficult to measure, though there has been use of a perceived engagement scale (Hu, 2010). Umbach and Wawrzynski (2005) found that by providing students opportunities to participate in the learning process, teachers can positively influence students' levels of perceived engagement. This should not seem too surprising as educators providing students with opportunities to participate should increase both engagement and perceived engagement. Northey et al. (2017), in building on prior definitions of engagement, anticipated that an increase in students' perceived engagement would be related to increases in student motivation and commitment. Within their study, Northey et al. (2017) found that perceived engagement can sometimes mediate the relationship between students' participation and their academic achievement.

Reeve (2012) also found that engagement has mediated the direct effect between student motivation and academic outcomes. Urdan and Schoenfelder (2006) also found a

link between motivation and engagement in their findings that some student characteristics, such as asking for help, can impact both student motivation and engagement in academic activities. Student motivation has been found to be positively impacted by peers, especially when they expect each other to cooperate and when students receive help from classmates (Wentzel, Battle, Russell, & Looney, 2010). Goodenow (1993) also found that students' perceptions of belonging can affect academic motivation and expectancies for academic success. As educators, we need to not only be aware of the impact that engagement and motivation have, but how our actions and decisions as educators can positively or negatively impact student engagement and motivation. Much of this comes from the way teachers create their various classroom environments, and the way that engagement and motivation are fostered to promote and increase students' academic success.

The Role of the Teacher and the Classroom Environment

Just as student engagement and motivation can impact students' academic success and achievement, the teacher and the classroom environment have also been found to be useful in predicting academic success. The teacher, whether explicitly or implicitly, manages the classroom environment and everything that does or does not happen in their classroom. This includes creating an environment that fosters student engagement and motivation, and it has been found that collaboration can help create such an environment (Zhao & Kuh, 2004). Collaborative learning has been described as a system in which individuals work together to achieve common objectives (Blasco-Arcas, Buil, Hernandez-Ortega & Sese, 2013) that has been described as critical for learning success

(Fischer, Kollar, Stegmann, & Wecker, 2013). The impact of collaborative learning has been previously researched, leading to findings that collaboration of students working together in groups can increase and strengthen student knowledge (Järvenoja & Järvelä, 2009).

Synchronous student interactions have also been found to have positive influences on student learning (Roschelle & Teasley, 1995), thus allowing for improvement of students' academic success. The increase in technology use within the world of education has thus allowed for students to collaborate without needing face-to-face interaction, but instead can collaborate together in an online environment (Janssen & Bodemer, 2013). The use of mobile learning has also been found to encourage additional student participation by reinforcing students' willingness to plan their own acquisition of knowledge (Watkins, 2008). Alavi (1994) found that student participation in discussion groups can be used as a form of collaborative learning, thus strengthening the connection between collaboration, participation and academic success. Collaborative learning has also been labeled a social imperative that has had positive impacts on individual learning behaviors, academic outcomes, and even overall group knowledge (Jeong & Hmelo-Silver, 2016), which makes it a critical aspect of the classroom environment that teachers can purposefully implement on a regular basis.

Collaboration in the classroom environment can also be greatly impacted by students' relationships both inside the classroom itself and even within the school environment (Northey et al., 2017). This increases the importance of educators to be aware of the impact they have in creating their learning environments. Not only can we as educators purposefully implement collaborative learning opportunities, but we should

also be aware of our role in fostering opportunities for students to create positive relationships with one another. It is important for educators to be aware of their students, their learning styles, and to some extent, their personalities. Past research has also found that students with avoidant and insecure attachment styles have reported significantly lower academic achievement (Majimbo, 2017).

This creates the challenge for all educators to use this, and other similar information, to create a pleasant student-centered learning atmosphere to increase student academic success and achievement. Similar to other positive relationships between collaboration and students' academic success, Van Rijsewijk et al. (2018) found that students' academic achievement flourishes in classrooms in which many students are actively helping each other. This should not seem surprising as it has also been found that students who feel invisible have low achievement (Aparisi et al., 2015). Not only do teachers play a significant role in shaping and creating the classroom environment, the teacher themselves can play a significant role in academic achievement and success (Mary et al., 2018).

Teachers can serve as important developmental figures in the lives of students by helping foster the unique talents and abilities of each student within their classes (Nye, Konstantopuolos, & Hedges, 2004). Because students are all unique, educators must understand Cox's (2013) findings that the different responses students have to various learning environments and teaching methods, along with different personalities, can significantly predict academic achievement. Teachers also impact students' learning because of their own biases, beliefs, and worldviews regardless of if these are intentionally or unintentionally seen in their classrooms (Milner & Laughter, 2015). The

more teachers understand the individualities their students have, the more likely they are to meet the diverse learning needs of all students and avoid the potential pitfalls of a teacher-centered classroom. All of this sheds light on some of the many difficulties that teachers face each day, but it is also important to notice that teachers do have the ability to foster an environment for students to participate in self-regulated learning.

Self-Regulated Learning

Self-regulation has been used to refer to the abilities in controlling one's thoughts and emotions that impact behavior and has been linked to motivation (Bandura, 1991). Self-regulated learning (SRL) has also been found to positively predict students' academic achievement and success (Annalakshmi, 2019). There have been many competencies that have been found to be involved in self-regulation including activating, monitoring, inhibiting, and adapting behaviors towards the attainment of the desired outcomes (de la Fuente, Zapata, Martinez-Vicente, Sander, & Cardelle-Elawar, 2015). Educators, regardless of the level and role, need to be aware of self-regulated learning and its potential impact. Some researchers have argued that self-regulation remains relatively stable from childhood into adulthood (e.g. Lengua, 2006) while others believe that self-regulation is not fully developed until adulthood (McClelland et al., 2017).

Students sometimes struggle academically because they are unable or unwilling to learn from their mistakes. Self-regulation can assist with this because self-regulation involves learning from mistakes, which Fernandez-Rio, Cecchini, Mendez-Gimenez, Mendez-Alonso, & Prieto (2017) found to help promote self-control and self-efficacy, assisting in increasing students' academic success. Another way that students can learn

from their mistakes to help improve their academic success is through resilience, or 'grit' (Tang et. al, 2019), a process through which students are able to adapt when confronted with adversity (Annalakshmi, 2019). Researchers have found a positive relationship between self-regulation and resilience (e.g. Makila, Marecia, & Wasanga, 2017) which has been found to impact school engagement and academic achievement (Rodriguez-Fernandez, Ramos-Diaz, & Axpe 2018). Metacognition has also been found to be related to resilience (Annalakshmi, 2009) which been linked to self-regulatory behavior (Bursali & Oz, 2018). Metacognitive awareness, knowledge, and control have been shown to be interrelated aspects of metacognition (Young & Fry, 2008).

Metacognitive control has been described as a process that utilizes metacognitive knowledge to regulate one's own cognitions including activities such as planning and evaluation to help control the learning (Schraw & Moshman, 1995). Educators need to understand that metacognition is important and has been found to be amenable to change (Sugita, 2018). Teachers can use this to help teach and model metacognition, resilience, and self-regulated learning to help increase students' academic success and achievement in their classrooms. This is an important aspect especially within a technology-infused classroom such as the blended learning environment that some of the students are a part of within this current study. As educators it is our job to do everything we can to understand what we can do to improve academic achievement and success. This current study finds itself in the intersection of these ideas and intends to build upon the previous research to help further students' academic success and achievement in the blended learning environment.

Blended Learning

Though blended learning is not the focus of this study, it is possible that some of the student participants may be from a blended learning mathematics course. Student participants that are learning mathematics in a blended learning environment have chosen to participate in such a learning environment which makes it important to understand some aspects of blended learning and the previous research that causes this learning environment to be different.

Even though there have been different definitions, there have been some commonalities in definitions of blended learning used in previous research. The main distinguishing and defining feature of blended learning environments is the inclusion of both in-person learning while also utilizing online learning methodologies outside of the 'traditional' in-person classroom environment often through the use of a learning management system (LMS). These defining features that have been widely used include the facts that part of the instruction must be delivered through an online format, and students still engage in face-to-face learning with an instructor (Dziuban, Hartman, Cavanagh, & Moskal, 2011; Hogan, 2011; Jacobsen, 2011; Ololube, 2011). Research has shown that the combinations of both traditional and online teaching methods (i.e. blended learning) can offer new opportunities to help optimize learning (Spanjers et al., 2015). One commonly found benefit of blended learning comes with allowing the students to potentially have more control over the time, place, or path of learning (Horn & Staker, 2014). Within my own teaching practice, this is seen on our 'online' days where materials and assignments are posted, but students have the ability to choose when and where to complete anything that is expected of them that day.

Blended learning has taken many forms that have been adapted by educators (Horn & Staker, 2011), including the Flipped Classroom, the Face-to-Face Driver Model, and the Flex model to name a few. From the different blended learning models, the Flipped Classroom model was selected by the district as the model implemented in the blended learning classroom for this study. The Flipped Classroom uses instruction that would normally occur in the classroom and is instead replaced with an online lesson or activity, sometimes in the form of a video (Bagby, 2014). This method is often utilized with older students (i.e. high school students) because the students access the learning materials at home which then allows the in-class face-to-face time to focus more on a full class discussion and other student-centered learning activities rather than teacher instruction (Tan & Hew, 2016).

Regardless of the classroom environment students find themselves in, students' views and definitions of academic success can greatly be influenced by mathematical identities, of which previous research is the focus of the section that follows.

Mathematics Identities

Recently there has been an increase in science, technology, engineering, and mathematics (STEM) education due to an increase in STEM jobs. Chen (2009) argued that students who take advanced mathematics classes in high school are more likely to pursue a career within the STEM fields. As such, math can act as a gatekeeper for students as they pursue various career opportunities (Esmonde, 2009), so it is important to understand how students view learning mathematics and the mathematics classroom environment. Unfortunately, there are often many reasons why students choose to

discontinue studying mathematics. Froschl and Sprung (2016) verified this idea in their findings that more than 50 percent of high school students plan to drop learning mathematics as soon as possible. Brown, Brown, & Bibby (2008) found in a study of 16-year old students that 'bored' was the word used most often in describing their attitude in relationship to mathematics. From various student experiences, many students do not view themselves as doers of mathematics, but instead as something that other students do (Latterell & Wilson, 2013) which makes it crucial to understand mathematics identities to help students succeed.

There has been an increase in research with many studies recently in mathematics education focusing on the idea of mathematical identity, in some cases mathematical identities. Identity has been found to be related to students' engagement, participation, and persistence (Hazari, Sonnert, Sadler, & Shanahan, 2010), and thus is also related to academic success and achievement. Bouchey and Harter (2005) also found a positive correlation between teachers' beliefs and behavior and students' self-perceptions about academic competencies, which can seem even more evident within the mathematics classroom environment. This has been verified within mathematics specifically as previous research has found that performance in mathematics (i.e. academic success within mathematics classrooms) can be influenced by students' perceptions of how parents and teachers view them in relation to mathematics (e.g. Bouchey & Harter, 2005). Previous research has also investigated the impact that gender can have on how students shape and form their mathematical identities (e.g. Froschl & Sprung, 2016), which is an important aspect that is sometimes overlooked.

To better understand previous research on mathematics identities, one must first understand how mathematics identities have been previously defined.

Defining Mathematics Identities

Though there has been an increase in research focusing on mathematics identities, some still argue that mathematics identity is still an underdeveloped construct (e.g. Cobb, 2004). Some researchers have even gone as far as claiming that the idea of identity and mathematics identity is confusing in nature (Wetherell, 2010). Whether it is underdeveloped or confusing in nature, many researchers have pointed out that there is a lack of consensus and an absence of clear definitions of mathematics identity (e.g. Sfard & Prusak, 2005). Radovic, Black, Williams, & Salas (2018) discuss that identity is something that is fluid and changeable depending on contextual influences which is supported by Bishop's (2012) findings that interactions can restrict students' actions, competence, confidence, and access to participate. Throughout previous research on mathematics identities, many different definitions have been proposed; some fairly similar in nature and others very different.

In their research, Grootenboer (2013) defined identity as a combination of knowledge, skills, beliefs, values, and attitudes. This is especially important and fitting within the mathematics classroom in being aware of not only students' abilities/knowledge and skills, but also of their attitudes and beliefs that they hold. Froschl and Sprung (2016) similarly define mathematics identity as a combination of beliefs, attitudes, emotions, and dispositions about mathematics. One thing that they include in their definition is including ideas of students' motivation and approach to

learning and using mathematics, both in the classroom and beyond. One of the main similarities that is held by many researchers in their previous definitions is the participative nature of identity and mathematics identity.

Some of the previous research has described mathematics identity as the doing of mathematics and a measurement of mathematical abilities (e.g. Owens, 2007). Similarly, Darragh (2016) described identity as being constructed through participation and engagement in the learning, and not simply an act of acquisition. On the other hand, Martin (2012) bridged the gap between these ideas in defining identity not only as an action in learning and using mathematics, but also a set of beliefs, something that students acquire. Whether or not identity is completely defined by participation, it is important to recognize that mathematics is a subject that is often not learned without participation to build and create not only procedural fluency, but to also increase conceptual understanding. Alternatively, other definitions of identity have focused or included a narrative story-telling nature.

One of the more popular definitions that is held in previous research is the definition proposed by Sfard and Prusak (2005) in that identity is a set of stories that people not only tell about themselves but also stories that others tell about them. They further include the idea that mathematics identity is a concept that is held of where students 'are' mathematically. McCulloch et al. (2013) similarly define identity with how one knows or sees oneself, which is similar to the definition proposed by other researchers (e.g. Cobb et al., 2009; Kaspersen, Pepin, & Sikko, 2017). Not only does identity include how students view themselves, but sometimes how students want to be viewed or recognized as a certain type of person (Gee, 2000). Some researchers have

even discussed and defined identity as ‘multiple’ or ‘plural’ in nature with many factors (e.g. Darragh, 2016), as seen in the various definitions presented.

Regardless of the definition(s) held by researchers, many have discussed the multifaceted nature of mathematics identity (e.g. Lynch et al., 2020) with various dimensions of identity. Within their discussion of mathematics identity, Radovic et al. (2018) discussed a social or subjective dimension, an enacted or representational dimension, and a stability dimension. Other researchers have included other dimensions, including knowledge, ability, motivation, and math anxiety (e.g. Anderson, 2007). One thing that all researchers recognize and agree upon is the importance to continue to increase understanding of students’ mathematical identities to better assist students in learning mathematics. Not only will this assist students in learning, but it will also help increase students’ academic assistance within the mathematics classroom.

Not only has research in mathematics identities investigated how to identify and define mathematics identities, there has also been research focused on how gender impacts views and definitions of mathematics identities. Whether it is because of gender or some other factor, marginalization has been found to impede student success in mathematics classes (Ruef, 2020) making it important to understand how gender impacts mathematics identities to help avoid any such marginalization.

Gender and Mathematics Identities

One of the stereotypes that have been identified in previous research investigating the learning mathematics and mathematics classrooms is the belief that women cannot do math (Spencer, Steele, & Quinn, 1999). Similarly, in our recent educational system,

there is still a negative message that girls sometimes receive that can discourage them from math, including the idea that girls do not have the 'math gene' (Froschl & Sprung, 2016). This is furthered in previous research as Llewellyn (2009) argues that mathematics is constructed as masculine. Contrary to the methods that mathematics is sometimes taught, girls tend to have a greater need to understand more of the reasoning behind the mathematical concepts taught to form deeper connections and can have increased 'math anxiety' when understanding is lacking (Froschl & Sprung, 2016). They further found and argued that understanding the development of mathematics identity is crucial to increasing girls learning math and participation in STEM.

It is also important to understand how students and educators view successful math students, which explores the connection between the ideas of academic success and mathematics identities. Some researchers have viewed successful math students as having mathematical understanding and knowledge (e.g. Skemp, 1989). Though, as previously stated, there is a difference in the conceptual versus procedural foci of boys and girls in learning mathematics which can create a divide between how students 'succeed' in the mathematics classroom. The classroom environment has also been found to impact, both explicitly and implicitly, through such factors as verbal feedback that the student response is worth sharing or discussing or rejected (Ruef, 2020). This is important to understand as teachers need to be aware of how their own gender impacts how they act and react in their various classroom environments to the students – especially in the mathematics classroom.

Though there has been previous research focused on mathematics identities, there is much that the current research can build upon.

Future Research

Understanding that academic success and achievement have been found to be related to the predictors of student engagement and motivation, the role of the teacher and the classroom environment, and self-regulated learning leads to many implications for future research. Though student motivation, both intrinsic and extrinsic, have been studied in the past, it has been suggested that it is possible to explore new methods of measuring student motivation (Hepworth, Little, & Hancock, 2018). This could definitely be a challenge for educators and researchers, but investigating the impact of engagement and motivation could be furthered by looking at other ways to measure these variables. Are there specific methods for creating and/or maintaining student engagement, or is this an opportunity for future research to investigate and further initiate the use of such methods?

It has also been mentioned that future research may also want to look into more social-psychological dimensions of students rather than simply focusing on engagement along with investigating the impact that psychological well-being has on student academic success (Roksa & Kinsley, 2018). Van Rijsewijk et al. (2018) have also suggested that future research should look into the feedback between teachers and students and how these impact the structure of the classroom and academic achievement. Future research has also been suggested to explore different types of SRL strategies that students employ, especially in a distance learning environment (Bruso & Stefaniak, 2016). Annalakshmi (2019) has also discussed the need for research to investigate how to teach self-regulation to students along with interventions that can build and promote

resilience. As has been shown, there has been much research on the ideas of academic success, though there are also gaps and the constant need for future research.

There have been various gaps identified for potential future research regarding mathematical identities, including the need to explore students' relationships with school mathematics (Andersson, Valero, & Meaney, 2015). Darragh (2016) discussed the possibility that mathematics identity, or identity in general, may seem to be a 'first world problem' along with discussing the need for more clarity of defining mathematics identity. Other researchers have also proposed that future research on mathematics identity could investigate how some characteristics of learners and identity are considered mathematical in some contexts while being viewed as anti-mathematical in other contexts (Kaspersen et al., 2017). Cribbs, Hazari, Sonnert, & Sadler (2015) proposed that future research is needed to explore the connections between instructional practices and self-perceptions that students hold, and how they impact their mathematics identities.

The current study hoped to not only build on the previous research, but also by using a student-focused lens, help fill some of the gaps in the previous research, including the potential to analyze academic success within the blended learning environment.

Conclusion

As has been shown within this review of literature, there is much that the current research can build upon. Though there have been some definitions proposed in past research (e.g. Kuh et. al, 2006; York et al., 2015), academic success has not been consistently defined and measured in previous research. Even within these definitions provided, the various aspects and predictors of academic success (e.g. student

engagement and motivation, the role of the teacher and the classroom environment, and self-regulated learning) are often difficult to consistently measure. The current research intended to investigate further how these predictors of academic success are viewed by students themselves and the impacts that they have on students' definitions and attainment of academic success, specifically in the mathematics classroom. The blended learning classroom environment has been found to have pros and cons for students (Horn & Staker, 2014) which may be found to impact students' definitions of academic success in the current study.

In analyzing students' definitions of academic success, it is likely that much of their definitions will, to some extent, be influenced by their mathematical identity. Mathematics identity has also been increasingly researched recently with a similar lack of a consistent definition in previous research, though most of the definitions proposed are much more consistent in nature. As previous research has shown, much has been analyzed in looking at how gender has impacted views of mathematics identities (Froschl & Sprung, 2016), which makes it not surprising that differences have also been found between genders regarding academic success (Voyer & Voyer, 2014). Since the current research focused on students' views of success within various mathematics classroom settings, the use of mathematical identities was also included through both internal and external factors that help students shape their own definitions of academic success.

Though it is important for educators and other educational stakeholders to understand and define academic success, as a classroom teacher, I find that the students' definitions of academic success are crucial to my classroom and classroom environment. The current study intended to build upon this previous research in focusing on students'

definitions of academic success, which has often been found to be a gap in the previous research and thus helps shape my problem of practice.

CHAPTER 3

METHODOLOGY

There is a need for more research regarding student perceptions and definitions of academic success in various classroom settings and content areas. The current study will hopefully provide an impetus to future similarly student-centered research on academic success. As has been shown in previous research, academic success has always been and continues to be extremely difficult to define and measure. Is it based on grades? If so, what can and should be graded? Is it based on understanding? If so, what does it look like when students understand? Is it based on perseverance? If so, why do many academic stakeholders believe in grades and academic performance to measure success?

In this current study, I sought to better understand how students define academic success within the mathematics classroom which would also allow them to better understand their own views and definitions. In doing so, I intend to help future students better 'succeed' and find success within the classroom through an increased mutual understanding; though, it must be stated that future students may view academic success differently than the student participants in this study. This research came within an attempt to improve my teaching practice by better understanding academic success and the multitude of views that various stakeholders (e.g. students, parents, teachers, administrators, etc.) have regarding academic success, yet still focusing on the views and definitions of students themselves.

Specifically, within this study, I intended to better understand the following research questions:

1. How do students personally define their own academic success?
    a. In what ways do internal factors (e.g. mathematics identity, intrinsic motivation and personal goals) influence students' definitions and understanding of academic success?
    b. In what ways do external factors (e.g. parents, teachers, peers, etc.) influence students' definitions and understanding of academic success?
    c. In what ways do classroom environmental factors (e.g. the teacher, classmates, etc.) influence students' definitions and understanding of academic success?

Methods

Research Design

Quantitative research is favored by some researchers because of its more structured approach that more easily lends itself to replication in future studies. I have taught statistics courses in which I have often discussed quantitative research design with a focus on creating random samples with the goal of replication of research findings. This is also paired with more rigid data analysis techniques that no matter who is analyzing the data, the same results should appear, often through statistical analyses. It can also be argued that quantitative research is more 'scientific' in nature because of its structure being more linear and unidirectional in nature (Reswick, 1994). As a

mathematics teacher, I originally believed that I would utilize quantitative methods, due to my familiarity with such statistical methods.

Since the goal of this research was to use student information to create a working definition of academic success, I felt that qualitative methods would better provide me with opportunities to be more flexible in my design and data collection to adapt to the data already collected. To this end, because I wanted to better understand my students' definitions and descriptions of success, self-study and case study research methodological approaches were deemed most appropriate. The sections that follow include descriptions of case study and self-study research methodologies; the research participants, context, and setting; and means of data collection and analysis.

Qualitative Research

Qualitative research has been used as an umbrella term that encompasses many different types of approaches (Young & Babchuk, 2019). In comparison to quantitative methods, qualitative methods have sometimes been "viewed as a soft alternative to… more scientifically legitimate quantitative approaches" (Babchuk, 2019). Responding to such claims, some researchers have found and argued that there are criteria that are present in quality qualitative research: rigor, validity, reliability (sometimes referred to as consistency), and generalizability (Grossoehme, 2014; Leung, 2015). The presence of bracketing, the setting aside of the researcher's preconceived thoughts to have a fresh, unencumbered view of the data being collected, in qualitative research can increase and enhance the levels of rigor, validity, credibility, and trustworthiness (Shufutinsky, 2020). When conducted responsibly, it can provide both readers and researchers with

different views into the participant views of the research and the natural settings in which the data is collected (Babchuk, 2019).

In comparison to the 'manufactured' settings of quantitative experiments, qualitative research tends to include extensive uses within a natural setting to collect data (Lichtman, 2013) in trying to avoid manipulated results (Hatch, 2002). Though the use of data collection in the natural setting is often an identifier of ethnographic research (e.g. Young, Sarroub, & Babchuk, 2019), it is not a unique attribute and is also utilized in other qualitative methods. For example, Liu & Babchuk's (2018) case study included three phases of classroom observations, reflections and open-ended interviews with student teachers as they developed classroom management strategies.

The current study can easily be described as practitioner inquiry through which validation is given to the practitioner's emerging knowledge and theoretical frameworks from their inquiry stance (Cochran-Smith & Lytle, 2009). In light of viewing this as practitioner inquiry and the goals of this study of wanting to better understand student definitions of academic success and use this understanding to hopefully create a coherent definition of academic success, a case study methodological approach was selected as most appropriate.

Case Study

Pedagogical case study was developed as an active teaching method that supports both theory and practice within both the classroom and beyond (Gawel, 2012). Within the opportunities to investigate in detail the similarities and differences within the given case, conclusions are able to provide an increase in understanding of a phenomenon

(Ambrosini & Bowman, 2010); in this case, an increased understanding of students' definitions of academic success. Through its many uses, case study methodology has been able to contribute significantly to teaching (Gill, 2011; Tompson & Dass, 2000) though not always being used in research specifically pertaining to teaching (Yin, 2014). Similarly to Lapoule & Lynch (2018). The current research used the case study method to help enhance my teaching practice and research through a better holistic understanding of students' definitions of academic success.

Though case study has been widely used since its inception, case study has had various critics and criticisms over time. One of the most common criticisms is the dependency on a single case and whether or not the single case is capable of providing any sort of generalizable conclusion. In response, some have argued that the goal of research should be the establishment of parameters that can be applied to all research, thus making a single case acceptable as long as it meets the established objective (Tellis, 1997). More specifically, in the world of management, some scholars have argued that case study methodology does not always reflect complexity, may lack in being action-based, and may be too distant from real experiences (Bridgman, 2010; Jennings, 2002; Zivkovic, 2012), which likely could parallel criticisms of case study within the realm of education as well.

Over the course of time, case study has increased in use within the world of education as it can sometimes be used to develop critical thinking. One of the greatest components of the case study methodology is the triangulation that can occur to ensure accuracy and alternative explanations (Stake, 1995). Triangulation in case studies can be seen through the use of multiple sources of data, including, but not limited to, field notes

and interviews Yin (2014) as will be used in the current study. A major mode of data analysis within case study is pattern-matching (Stake, 1995; Yin, 2014) which was utilized within the current study through categorical aggregation of the data collected.

Within the realm of case study, there have been various sub-approaches identified: the single instrumental case study, a collective case study, and the intrinsic case study (Creswell & Poth, 2018). The single instrumental case study has been described by Stake (1995) as having a specific research question or need for general understanding that guides the focus of studying a particular case. Within a collective case study, there tends to be a design of replication with multiple cases that differ to understand the phenomenon (Yin, 2014). In comparison, the intrinsic case study focuses on the case itself that somewhat mirrors a narrative approach but instead with case study analysis (Creswell & Poth, 2018). Due to these differences, an intrinsic case study approach was chosen for the current research as my research questions were all focused on a single 'case' itself of the views and definitions of my students themselves.

Self-Study

Self-study is a research methodology that has gained popularity and use through the promoting of continual self-study of one's own teaching practice (Cochran-Smith & Donnell, 2006) with a basis in the postmodernist belief that one cannot divorce the 'self' from research or practice (Cochran-Smith & Lytle, 2009). As a specific type of practitioner inquiry, characteristics of self-study include: the role of practitioner as researcher within the study and the professional context as site used for the study (Cochran-Smith & Lytle, 2009). Much of self-study research has been undertaken at the

collegiate level in teacher education, though there has also been previous research using self-study in K-12 school settings (e.g. Hannigan et. al, 2016, Luthuli et. al, 2020). There have been arguments within the world of education that self-study is necessary, and could even be viewed as common sense (Bullough & Pinnegar, 2001). Thus, even though there have been criticisms of self-study, within the current study, the use of self-study methods was deemed necessary.

Consistent practitioner inquiry, such as self-study, is an important aspect in the development of teachers, teaching, and teacher education providing benefits and potential positive results. Within the combination of the roles of both practitioner and researcher lies a region in which one can gain increased insights into their own teaching practice, and it is within this combination of roles and increased insight that I conducted the current study. In combining self-study with case study, I hoped to be able to achieve a balance between myself, my teaching practice, and the data collected, thus validating practitioner knowledge and any emerging theoretical frameworks that could arise from this study. Through the use of self-study in this research, I was also able to better understand how my views and experiences are transferred in my own classroom environment.

Context, Setting, and Participants

The context of the current study was a large Midwest high school with over 2,000 students. Of the student population, about 12% identify as minority and 8% are economically disadvantaged. The school boasts a graduation rate of 97%, but only claims a mathematics proficiency rate of around 45% and a reading proficiency rate of

58%. Throughout the school, academics and 'academic success', though not always consistently defined, have always been important aspects of the school culture, including pride in its Advanced Placement® (AP) courses, having about 53% of the student population taking at least one AP exam in data from recent years. Even though academics has always been held highly within the school culture, including the addition of an AP Capstone program, there has also been a recent shift with an increased focus on College and Career Readiness (CCR) to help students be better prepared for whatever the future may hold for them after graduation.

In order for research to be conducted, approval was required by the Institutional Review Board (IRB) for Human Subjects. An IRB protocol application was completed and was approved. Additionally, it was required that the school district in which the study took place approve of the research study (see Appendix E). Building level administrators also approved use of their school building as the research site for the current study.

The classrooms that formed the settings in which the student participants were learning mathematics included both traditional and blended learning environments. The use of blended learning classrooms came recently within the school district as a response to the ever-changing nature of educational technology and the increase in online and hybrid courses at the university level. Though other blended models exist, the Flipped Classroom model was selected as the basis for the blended learning environment that some of the student participants may have been learning College Algebra within. The other students in the 'non-blended,' which I will refer to as the 'traditional' learning environment, were learning mathematics in a more teacher-led environment with an

increased amount of direct instruction. Student participants that were in these 'traditional' learning environments included both College Algebra and AP Statistics. Both of these courses are generally Juniors and Seniors, though it is possible that there may be some Sophomores within these mathematics courses.

Regardless of the learning environment, it is important to note that the school and these classes follow a 'block schedule' in which the students attend the same four classes for 90-minutes a day everyday for the duration of each semester, around nine weeks. This may have impacted their definitions and thoughts of academic success, especially in subject areas like math. Within the block schedule that is implemented, it is possible that a student may take one math course in the fall of one school year, and then not have another math course until the spring of the following school year. In doing so they may go a complete calendar year between mathematics courses, and such discontinuity between learning content and being able to continue building upon the content in the next course with such a large break, it is possible that students' definitions and views of academic success, especially in the mathematics classroom, may be impacted.

In sample selection, a few phases were utilized:

1. All potential student participants were informed of the study.

All students within my College Algebra, 'traditional' and 'blended', and AP Statistics courses from the 2019-2020 school year and the Fall semesters of the 2020-2021 school year that were still high school students during the study were identified as potential student participants. It was originally thought that this would include over 100 students, but with the effects of COVID-19 impacting students' plans (i.e. graduating early), there were only about 50-60 students available as potential student participants.

Of these potential student participants, I was able to recruit 15 student participants that were willing and able to participate in the study.

2. All students in the sample space

After collecting student assent and parental consent forms, I administered an Initial 'Success' Survey (Appendix A) to 12 of the 15 potential student participants; three of the students were either unable or unwilling to continue participation within the study at this phase. It was intended that purposeful sample selection would then take place in selecting a sample of student participants from the sample space, but due to the low response of potential student participants, all 12 of the students that were still willing and able to participate were chosen to take part in the study. Within sample selection, the following variables were considered to make sure they were present amongst my student participants:

- Gender – I purposefully wanted to include both male and female students as there may be some unforeseen differences between how students of various genders define academic success, especially within the mathematics classroom.
- Grade Level – I intended to include both juniors and seniors to see if age and proximity to graduation may impact views.
- Course – I purposefully included students from my 'traditional' College Algebra, my 'blended' College Algebra, and my AP Statistics courses as the variety of difficulty and classroom setting may have some impact on how they view success in the classroom.

Permission was attained through parental consent and student assent forms from all student participants prior to participating in the study.

Demographics of Student Participants

Overall, the demographics of the student participants were fairly similar to the demographics of the school student population, though not. All 12 of the student participants were seniors getting ready for graduation and their next steps of their college and career plans. As they were all seniors, I am fairly certain that they were all 18 years old which caused me to get student assent form signatures along with parental consent. Due to the overall nature of the student population, I believe that all student participants came from either middle-class or upper-class families, though I am not completely sure of this as SES status was not somethings that I specifically asked my student participants about. All 12 of the student participants were Caucasian, of which there were seven female participants and five male participants.

Of the 12 student participants, five were students that took the 'traditional' College Algebra, three were from the 'blended' College Algebra, and the remaining four took AP Statistics. Two of the students had taken their respective mathematics course with me during the 2019-2020 school year and the remaining 10 were students from the Fall 2020 semesters. All student participants chose pseudonyms to help protect their identity throughout all research phases, including participants using other student pseudonyms during small group discussions.

Procedures

Means of Data Collection

Data collection for the current study included three main aspects of data to analyze my research questions: an individual 'success' survey, individual participant interviews with field notes, and small group discussions. Some researchers have discussed that outside perspectives are impossible to use within self-study (e.g. Cochran-Smith & Lytle, 2009), but not all agree as Heaton and Swidler (2012) assert that practitioner-researchers should take advantage of their dual purpose to find ways to be both present in the inquiry and also a witness to what is outside of the inquiry. As the classroom teacher for all student participants I was able to use my experiences and interactions with my student participants to provide further insight into the students' views and definitions of academic success. Though no formal observations were conducted within the context of this study, as data collection began after the student participants were no longer in my classes during the data collection phase, personal information about classroom recollections was recorded in field notes (Fetterman, 2010). In addition, through the taking of field notes throughout the phases of the current study, I was able to use bracketing to remove my personal views and thoughts to help provide data that could be analyzed with an untainted account of participants' views.

Initial 'Success' Survey

An Initial 'Success' Survey (see Appendix A) was given to all 12 selected student participants. The Initial 'Success' Survey was developed by myself to help my student participants begin thinking about how they view success. Questions 1 and 2 were

included to allow for the collection of some data regarding the student participants, including their grade and GPA that might help me better understand their views of academic success. Questions 3 and 4 were intentionally included to help students start thinking about how they define academic success, while at the same time possibly limiting their thoughts to those specific options. Prior to administering the survey to my student participants, I did have a handful of current students do a trial run to help me know if the wording was understandable and not confusing in how the questions and answer options were worded.

The survey was administered individually to student participants as they returned signed assent and consent forms. Students were given time to read the survey over and ask any clarifying questions prior to completing the survey. After completing the survey, I was able to set up a time with each of them to participate in the individual interview along with getting some information about their availabilities for a small group interview as well. Responses were individually recorded within my personal notes along with an analysis of group responses that was used to help identify and verify themes from responses during the student interviews.

Interviews

As the current study focused on students' definitions, semi-structured interviews were conducted with open-ended responses from the student participants (see Appendix B). The interview questions with student participants were focused on their individual definitions of academic success and their academic environments as well as questions related to themselves as students and learners. The semi-structured nature allowed for

flexibility of follow-up questions which were often used in every interview to clarify or to ask participants to expand on a given response. I acknowledge the possibility of needing to conduct follow-up interviews to better clarify student beliefs as data was collected, but no follow-up interviews were deemed necessary. Interviews, were conducted in quiet, private locations deemed comfortable by the student participants and were also audio recorded and transcribed for analysis (see Appendix G). It must be noted that the transcriptions provided in the appendix are not the complete transcriptions as there were some edits made, mainly to remove 'filler words' (i.e. like, um, etc.) along with shortening some responses with great care to maintain the essence of the students' beliefs, views, and understandings of academic success.

Of the 12 student participants, 11 participated in one-on-one interviews in this phase of data collection; one was unable to continue participating because of scheduling conflicts. During and after the interviews, I was able to jot down some notes and thoughts that arose from student responses to help focus any follow-up questions and are included in my personal notes. Due to technical issues, one of the interviews did not save the recording for analysis, but I was able to take decent notes throughout the interview to help provide some data for analysis for this individual student's views and definition of academic success. All of the interviews were conducted in private settings and lasted around 30-40 minutes for each interview.

Field Notes

As the current study utilized both case study and self-study methodologies, field notes were taken to provide data while also allowing me to 'bracket' out my views from

those of my student participants (Shufutinsky, 2020). Field notes not only consisted of jotting down notes and thoughts during the interviews, but also included personal knowledge and recollections of the student participants as individuals from my prior knowledge of having them as students in various classes (see Appendix F). A major challenge of field notes is setting aside time to take field notes in a timely manner to assure clarity and completeness before memories of events fade away. In order to better accomplish this form of data collection, I used shorthand, symbols, and mnemonic devices to help minimize the time commitment needed. Within my field notes, great care was taken to keep personal views, conjectures, speculations, etc. separate from my field notes.

Small Group Discussions

Small group discussions included nine of the 11 student participants within two groups of five students and four students, respectively, and were semi-structured with open-ended questions to allow for students to discuss their views of academic success in more of a conversational style (see Appendix B). Small group discussion questions were designed as a follow-up to data collected to help better understand data that had been collected while also verifying any emergent themes from the data. Small group discussions were also conducted in quiet, private locations deemed comfortable by the student participants and were also audio recorded and transcribed for analysis.

Of the 11 student participants for the study, two were unable to take part due to previous scheduling conflicts. Efforts were made to include these students in some follow-up in attempt to get their thoughts and feelings in response to the initial findings

from the interviews, but those attempts to maintain contact were unsuccessful as the school year quickly came to an end. Due to technical issues, I did not capture an audio recording of one of the small group discussions, but I took decent notes during the discussion to help verify findings. Both small group discussions were conducted in private locations and lasted around an hour for each small group discussion.

Means of Data Analysis

Similar to Coburn and Gormally's (2020) research, data analysis for the current study focused on identifying themes and common understandings to 'define' academic success from a student viewpoint. To this end, I used the process of memoing to help identify emerging themes from the data collected in its various forms. Through analysis of the memos recorded, I created a preliminary coding system to verify and validate the emerging themes and findings from the data collected.

The general list of codes was created from the data analysis to help identify categories that are specifically related to the research questions of the proposed study and will also be looked at across the cases as well to identify similarities and differences. As the codes were identified, I analyzed the data to identify patterns, related categories, and emerging themes using field notes, interviews, and small group discussion data for evidence that supports or contradicts the categories and themes that are identified (Merriam & Tisdell, 2016). Codes were then grouped and reviewed against the data collected to verify the emergent findings.

As I was both the researcher and the classroom teacher for these students, there was some concern about my ability to maintain an objective perspective. This was

compounded with the need to maintain validity and consistency throughout the implementation of the previously discussed qualitative methods. In order to address these valid concerns, a colleague also read through the data collected to help double check that the coding system used was reasonable and consistently used through the data analysis stage to verify the findings while allowing myself to bracket out my own beliefs and opinions from the data analysis.

Presentation of Findings

The data collected, after being analyzed, was restructured into a culminating narrative that compares and contrasts the various ways that students define academic success in an attempt to build a working definition of academic success, as viewed by students. This final narrative, in the chapters that follow, utilizes descriptive examples from students, participant quotes, and visual representations as needed to support findings to help provide a comprehensive comparative overview of the findings from the data collected (Creswell & Poth, 2018).

CHAPTER 4

RESULTS AND DISCUSSION

As an educator, one of my main goals is to help my students achieve academic success within my classroom. My research intended to build upon prior research to address my problem of practice to better understand how students themselves define academic success to allow myself, as the classroom teacher, to help foster an environment in which my students are able to attain success. In their research, York et al. (2015) proposed a definition of academic success as "inclusive of academic achievement, attainment of learning objectives, acquisition of desired skills and competencies, satisfaction, persistence, and post-college performance." Using an intrinsic case study approach, I sought to answer the following research questions:

1. How do students personally define their own academic success?
    a. In what ways do internal factors (e.g. mathematics identity, intrinsic motivation and personal goals) influence students' definitions and understanding of academic success?
    b. In what ways do external factors (e.g. parents, teachers, other students, etc.) influence students' definitions and understanding of academic success?
    c. In what ways do classroom environmental factors (e.g. the teacher, classmates, etc.) influence students' definitions and understanding of academic success?

Data collection involved an Initial 'Success' Survey with 12 student participants, Individual Interviews with 11 of the 12 participants, and two Small Group Discussions that included nine student participants. After analyzing the data and identifying emergent themes from the data collected, a colleague of mine also looked over the data and themes identified to verify that consistency was used in labelling the themes along with helping identify anything that was missed in the analysis. This chapter contains the results from the data collected in this study along with a discussion of these results of this study.

Results

There were many commonalities amongst student responses and definitions throughout all stages of data collection. It must be noted that though it was discussed, there were instances, which will be discussed more in the section that follows, where some students discussed certain aspects as being important in their personal views and definitions while others may have discussed those same aspects as not being important in their personal views and definitions. From the data collected, there were many themes that arose in how students defined and described academic success that led to the following codes being used to analyze the data:

- GR = Grade
- EF = Effort
- SE = Self-gratification/self-improvement
- UN = Understanding
- HI = Hinderances

There were three other labels that were also used specifically in relation to the research questions themselves, and did not necessarily arise as patterns from the data, but were instead used to help address the research questions:

- IM = Intrinsic motivation
- EM = Extrinsic motivation/external factors
- CI = Classroom influences

Influences on Student Definitions

Through my research questions, I was looking at how students defined academic success with three sub-questions looking at how various aspects influence these definitions. To better understand how students define academic success, I present my findings related to various influences that students discussed.

Internal Factors

In responding to the questions of the Initial 'Success' Survey, nine of the 12 student participants marked "Myself" as an answer to the question "Who influences your 'definition' of success?" Different aspects and levels of internal motivation were discussed throughout the data collection process. Some students, such as Becky, are very internally motivated to achieve 'good' grades, even to the extent of being personally motivated to get nothing less than an 'A' or '1' as seen in the following quote from her initial interview "… (w)hatever the best grade is, as long as I get that, I'm fine" (Interview 1). Others discussed internal motivation to meet their personally set goals and expectations – often related to achieving specific grades. Some of the student

participants, including Raven, in discussing setting personal goals, discuss the fact that they set "the bar" at different levels depending on the course: "(I)f I know I perform better in different classes, I'm most likely going to set that bar even higher for myself so that I can achieve beyond what I know I already can" (Interview 7).

In addition, some students discussed happiness and contentment with grades and final products as internally motivating: "If I am content with whatever grade or the amount of work I've done on a project or how something or a finished product… my measure of success is how content and happy I am with whatever I just completed" (Ralph, Interview 8). Others focused on the desire to challenge oneself and apply and push themselves to succeed. Nicole discussed her internal motivation as somewhat tied to external factors: "I don't want to be embarrassed by my grade, but if I'm not the only person in the class with like a not great grade, I feel like it wouldn't bother me a ton" (Interview 6).

In contrast to the focus on grades, Annie instead discussed that personal effort is a large source of her internal motivation in the following quote: "It doesn't really fulfill you in the end, knowing that you did good because you just slacked the whole time… you didn't challenge yourself" (Interview 11).

External Factors

Though grades were also listed as an internally motivating factor, grades also were discussed as being an externally motivating force for various reasons. Some students discussed the pressure that they felt to perform with achieving good grades and on standardized tests: "It's what teachers look at the most, it's what my parents look at

the most" (Ralph, Interview 8/). Many students also view grades as very closely related to not only personal goals and high school performance, but also highly related to the external pressures for internal post-graduation goals. Many students specifically discussed the need and pressure to have high levels of achievement in high school, needing good grades to not only get into college, but also for scholarships (e.g. John, Interview 2; MJ, Interview 9). In discussing her balance in desiring to get good grades, Nicole specifically stated, "I want to get good grades for college" (Interview 6). Annie more generally discussed academic success and achievement as being externally motivated through the pressure she feels because "(I)t has a role… on your future" (Interview 11).

High school itself was also mentioned as an external factor that impacts students' definitions and attainment of academic success. The high school that was the setting for this research has a very strong Advanced Placement (AP) culture and prides itself greatly in the ability for students to continue to challenge themselves in taking various advanced courses, even at the collegiate level through our AP program. Student participants listed different pressures from teachers and classmates alike forcing feelings that taking such courses was a requirement for success, even to the point where Becky felt obligated to take AP courses because she had previously taken different AP courses (Interview 1). Though most external factors were positive in nature, there were some hindrances that were discussed in students' abilities to achieve academic success, and thus possibly influenced student participants' definitions. These hindrances included: work (John, Interview 2; Ralph, Interview 8) and extracurriculars (Joe, Interview 3; Victoria,

Interview 4) along with spending time with friends and family (Sally, Interview 10; Annie, Interview 11).

Within the Initial 'Success' Survey, peers and parents were both selected as external factors as part of their answers to the question "Who influences your 'definition' of success?"; peers by three students and parents by seven students. Some students did not care about what their peers think, say or do: "My peers don't really influence success in the classroom for me" (Joe, Interview 2). On the other hand, other student participants discussed peers as a source of external motivation through the impetus for there to be some form of competition: "Even my classmates… it's a competition… I don't want to be the only kid in the class who gets a 70 on the test" (Sally, Small Group Discussion 1). Family members, most often specifically parents, were also mentioned by student participants as a form of external motivation, often related to various expectations for grades and performance, though some seemed to try and minimize the impact of this external 'pressure'. This is seen in the contrast of the following student responses: "(My dad) puts a lot of emphasis on grades and I got to keep them up… He influences my grades" (Joe, Interview 3) versus "Like my parents care about my grades, but I would say I care about them more" (Mike, Small Group Discussion 1).

The impact and role of the teacher in shaping the definition and attainment of academic success was often discussed, and since it could be classified as both an external factor and a classroom influence, it will be discussed in the Classroom Influences in the section that follows.

Classroom Environment

In their responses to the Initial 'Success' Survey, seven of the 12 student participants selected the teacher as one that influences their definition of academic success. Joe specifically related the difference in teaching styles in discussing his lack of success learning mathematics from one teacher in comparison to a different teacher (Interview 3). Not only did students discuss and understand differences in teaching styles, but many also mentioned the importance of teachers to reach out to students who need help, especially in mathematics. Victoria discussed how she feels that the teacher is to some extent responsible for their students' success, saying "(I)f they see that their kid is struggling, they will reach out… taking responsibility and helping…" (Small Group Discussion 1). Not all students agreed, adding the importance for the student to also take some responsibility "(Y)ou can have as many 'office hours' as you want, but if they don't show up, it's not the teacher's fault" (Becky, Small Group Discussion 1).

The relationship that teachers build with students was also discussed by students in being an important factor in helping students define and achieve academic success. Mike specifically mentioned a few times within his interview that he tries to establish a strong relationship with his teachers because it "helps me be able to learn the content better and… makes me feel a little bit like I'm at home" (Interview 5). Annie connected the relationship with the teacher with students' willingness and ability to apply themselves to succeed, "(When) teachers bond with the student, (it) really affects how a kid is going to work hard or have success" (Interview 11). Classmates were also discussed as being aspects of the classroom environment that can impact definitions and attainment of success, usually as a hindrance. Victoria mentioned that she found herself

more productive to study and complete homework at home without having to worry about any of the distractions of the classroom (Interview 4).

Many students discussed examples of how relationships, or lack thereof, with classmates can impact definitions and attainment of academic success. Within their small group discussion, Joe mentioned, "If you're in a class with, like all your buddies or something, you're probably not going to get as much done" and Becky responded with "(I)f you're in a class and you don't know anybody… I'm doing this all by myself" (Small Group Discussion 1). Some students also discussed the impact that different types of assignments (i.e. individual vs. groupwork) can impact students success through the different personalities and learning styles of the individuals. An example of this is in Ralph's discussion in which he mentioned his preference to work alone to maintain control over the pace as other students sometimes could cause things to "take forever… because people didn't understand it." (Interview 8). With regards to learning styles, Raven specifically discussed the fact that she prefers hands-on activities and assignments to help her better visualize what is going on to help increase understanding (Interview 7).

As some student participants participated in a 'blended' learning classroom environment, along with the impact of COVID-19 on school districts writ large, the influence of online learning was also discussed regularly. While some viewed learning online as a hindrance (Victoria, Interview 4), others enjoyed the freedom that learning online provided "I could do it at my own pace" (Ralph, Interview 8). Some students even discussed the fact that they are more willing and able to apply themselves in the classroom when in-person compared to online (i.e. Sally, Interview 10), even to the extent that without being in person there is no motivation (MJ, Interview 9).

Students' Definitions of Academic Success

Themes in Data

Within all aspects of data collection, four main themes that arose:

1. Grades
2. Effort
3. Self-gratification/self-improvement
4. Understanding

Grades

Nine of the 12 student participants answered 'Good grades'/GPA as part of their definition in defining academic success in the Initial 'Success' Survey, and 11 of the 12 student participants had a GPA between 3.0 and 4.0. Within their respective interviews, most students' examples of success in any classroom setting and examples of non-success were related to achieving good grades in specific classes and/or on specific assignments. There was little consistency between students in defining what a 'good' grade is, especially in mathematics as some students struggle with mathematics and earn lower grades (i.e. John, Interview 2). While some discussed the desire to always achieve the "best grade possible" (Becky, Interview 1), others discussed their view of good grades being dependent on "what (class) it is" (Joe, Interview 3). Regardless of what goals are set for grades in various classes and classroom settings, grades definitely play a role in all students' definitions of academic success.

Effort

Though effort was not included in the Initial 'Success' Survey, all of the student participants discussed effort, to some extent, within discussing their definition and measurement of academic success. Effort was even specifically listed and discussed in relation to different examples of success and non-success within interviews. Mike mentioned that in achieving academic success on a test he "put in three nights of work" compared to his example of not succeeding his freshman year when he "didn't prepare at all" (Interview 5). Within Interview 10, Sally discussed that there is no success where there is no effort placed, and Victoria similarly agreed, saying "(Y)ou can't really succeed if you're not trying your best… it doesn't feel as satisfying or as fulfilling as you did if you worked your butt off to get there" (Interview 4). On the other hand, even though effort does play a role in students' definitions of academic success, two students in Small Group Discussion 2 identified effort as being "least important" of the four themes identified in the data.

Self-Gratification/Self-Improvement

Self-gratification and self-improvement, though being fairly different in nature, were combined into one classification since both have a personal focus. Self-gratification wasn't specifically listed as an option, but Raven specifically added "pleasing yourself" (Interview 7) as a way that she defines academic success and Mike answered "self-gratification" (Interview 5) in defining academic success. Other students similarly discussed aspects of self-gratification and self-improvement within their interviews and small group discussions. While some mentioned avoiding the negative feelings of being

"embarrassed" (e.g. Nicole, Interview 6), many students focused on the positive feelings of being proud and feeling good about their grades, final product, etc. (e.g. John, Interview 2). The self-motivation to push for self-improvement was at times discussed in light of being self-driven (e.g. MJ, Interview 9), while other student participants tended to focus on self-improvement through the learning of material and furthering their education with the pursuit of college (e.g. Sally, Interview 10).

Understanding

Understanding was the most common response provided, with 10 of 12 student participants, in their description and definition of academic success in the Initial 'Success' Survey. Some students classify themselves as a 'math person' and know that "it comes really easy to me" (Mike, Interview 5) while others are completely opposite stating that mathematics is their weakest subject (MJ, Interview 9). Regardless of their various mathematics identities, many students described that understanding is sometimes difficult for them, even to the point of describing it as a struggle (e.g. John, Interview 2; Annie, Interview 11). Whether in a mathematics setting or not, many students view understanding as playing some role in their defining and attaining academic success.

Student Responses

Though there were themes found within the data, it is also important to understand and identify various aspects presented within each individual interview to help understand that there are similarities and differences that must be taken into account when trying to use this data to create a comprehensive 'definition' of academic success

from the students' point of view. In the next sections that follow, I use knowledge of each student participant and their responses in the data collected to discuss each student's views and definitions of academic success.

Becky

Becky was a Senior that had taken the Blended College Algebra course during the Fall of 2020. As a student in class, I always viewed her as a hard worker putting in extra effort to come in before and after school to ask questions and get help as needed. I perceived this to be a focus on increasing mathematical understanding, but from her interview responses, I found that this was more motivated by the grade. Within her interview, Becky stated that "Understanding it is obviously a big part… Understanding the material – specifically in math, I will remember it until the test… After the test, it's gone" (Interview 1), which helped show that, at least in a mathematics course, the understanding was only needed for the test in order to achieve a 'good' grade. As the term 'good' is often relative with respect to grades, Becky specified her goal as "whatever the best grade is" (Interview 1).

John

John was a Senior that had taken the 'traditional' College Algebra course during the Fall of 2020. As a student in my class, I often viewed John as taking the easy way out by not putting forth as much effort as he could. This may be partially impacted by math not being an easy subject for him as he described himself as normally getting 1's and 2's (A's and B's), but in math, success was "just passing" (Interview 2). A lot of his focus in

defining and measuring success was tied to the grade for the sake of helping set himself up for his plans of college post-high school. John also described himself as putting forth effort to achieve his grades to set himself up for his future while at the same time, mentioning that his dad does play a large role in motivating him and shaping his definition of academic success.

Joe

Joe was a Senior that had taken the 'traditional' College Algebra course during the Fall of 2020. I had some previous knowledge of Joe before he was in my class because his two older sisters had previously been in classes that I taught as well, helping me understand the impact of parental pressures that Joe would be facing in my class, mainly related to 'acceptable' grades. In class, Joe was a student that did not always put forth all of the effort that he could, but he always made sure to ask questions and get help when needed. Throughout our time together, Joe was very vocal whenever he needed help or had any questions that he wanted my help with. Understanding the material was a large focus of Joe's definition of academic success, also stating that the grades should be able to show understanding – "I think it should go hand in hand, like knowing it and getting a good grade" (Interview 3). Along with mentioning the pressure he feels from his dad, he also discussed various aspects of how the teacher can impact students' abilities to achieve academic success through the classroom environment.

Victoria

Victoria was a Senior that had taken the 'traditional' College Algebra course her Junior year in the Spring of 2020. Prior to being in my class, I had gotten to know Victoria a little bit through her work within our school's drama department/program. As a student, Victoria was always willing to put forth extra effort to get help and ask questions when needed. Her definition of academic success was greatly focused on understanding the material in order to "bring your grades up" (Interview 4), and happiness with the grades; but also admitting that not every grade will be an 'A'. She also described success through the use of effort describing that hard work must be done to help attain understanding, but also describing that without work, there can be no form of success:

> "Working as hard as you can is definitely part of defining success because you can't really succeed if you're not trying your best. And if you do, then it just doesn't feel as satisfying or as fulfilling as you did if you worked your butt off to get there." (Interview 4)

Mike

Mike was a Senior that had taken AP Statistics during the Fall of 2020. He was a very hard working and personable student, taking time to build a relationship with myself, as the teacher, to help him feel comfortable within the classroom environment. Within his interview, he even mentioned that this was intentional because it "makes me feel a little bit like I'm at home…" (Interview 5). In defining academic success, Mike listed that happiness and self-satisfaction play a large role, not only with grades, but even

being happy with the ability to understand the material. A very self-motivated student, Mike also mentioned that effort plays a large role stating the importance to "keep working hard all the time (and) the results will show" (Interview 5).

Nicole

Nicole was a Senior that had taken the Blended College Algebra in the Fall of 2020, but had also been in my homeroom for all four years of high school, giving us a previous student-teacher relationship. Even though Nicole worked hard in my class, mathematics was often a struggle for her, causing her to come in to get help and ask questions. Though grades were something that Nicole worked for so that she wouldn't be "disappointed by myself" or "embarrassed by my grade" (Interview 5), Nicole viewed effort and understanding as playing a more prominent role in her definition and measurement of success. Not only were parents and college discussed as external factors that shaped her views of academic success, her younger sister was also mentioned with feeling pressure of being compared with respect to grades.

Raven

Raven was a Senior that had taken the 'traditional' College Algebra in the Fall of 2020. As a student, Raven was a very quiet and reserved student that would sometimes struggle to fully understand the mathematics content being taught. This may be related to the nature of how math classes are taught and the fact that "(w)hen it's visual or just notetaking, it's much more difficult for me to comprehend what we're going over" (Interview 7). In the Initial 'Success' Survey, Raven was the only student to add the

answer of "pleasing yourself" in defining academic success, but Raven further mentioned in her interview that "it's not just pleasing myself, but pushing myself beyond what I thought I could…" (Interview 7). Not only did Raven list her mother as an influencing factor, but she also discussed how her brother helped set the example that she uses to continue to push and motivate herself to succeed in the classroom.

Ralph

Ralph was a Senior that had taken the Blended College Algebra in the Fall of 2020. Ralph was a unique student as he had not been physically in the classroom for health reasons for three years before he was in my class. In class, he was always active and engaged, helping answer questions while also asking questions and getting help when needed because he described himself as a student that would struggle in math more than other subjects. In describing academic success, Ralph was unique is saying that "for me, as long as I'm learning something, learning something new…" (Interview 8). Though grades weren't initially listed, as he shared his examples of success and examples of non-success, grades were found to be a very integral part of his description of academic success. "My measure of success is how content and happy I am with whatever I just completed" (Interview 8).

MJ

MJ was a Senior that had taken AP Statistics her Junior year during the Spring of 2020. Prior to being in my class, similar to Victoria, I had gotten to know MJ a little bit through her work within our school's drama department/program. As a student MJ was a

hard worker, always asking questions to help gain understanding. In defining academic success, MJ discussed how her definition is shaped from various external factors. She mentioned how her family and college focus on quantitative measurements, such as grades and GPA, whereas she personally focuses more on understanding the material taught (Interview 9).

Sally

Sally was a Senior that had taken AP Statistics in the Fall of 2020. As a student in my class, Sally was a hard worker that would often have to ask questions and get help to better understand the material and the difficulty of the course. In defining academic success, Sally mentioned that it is a combination of both grades and understanding, "I would say it means like understanding the material while getting a good grade on it" (Interview 10), with understanding having a larger impact in her definition, as seen in her focus more on understanding throughout the interview. She also described how her dad greatly influenced her views of success by giving her a focus on being able to control one's effort and attitude about the situation, "In order to succeed, you need to know what you're doing, (and be) confident… (If) you can see yourself making progress from when you started, that's still successful to me" (Interview 10).

Annie

Annie was a Senior that had taken the 'traditional' College Algebra during her Junior year in the Spring of 2020. As a student, there were often times were I believed Annie only seemed to care about my class solely for the purpose of earning a letter grade.

In describing academic success, Annie showed that grades were very much a focus of her definition of success in mentioning that "keeping my GPA above 3.5 has been the most successful thing I've done" (Interview 11). Annie also mentioned the external factor of success making her parents proud while still focusing on the grade as the measurement for success, along with mentioning the impact that teachers and the classroom environment can have on students' effort. Though grade was often at the forefront of her responses, Annie also mentioned self-improvement as a factor in that success is "personally seeing results in myself, not on like a grade book…" (Interview 11).

Defining Academic Success

Though this study was intended to focus on the mathematics classroom, the interview questions did cause the discussions to also include other content areas and types of classes. Because of this, I believe that the findings and summarizing definition that follows may also pertain to students' views of academic success in general, not solely for the mathematics classroom, but further studies would be required to verify such generalizations. In summarizing student responses, though not all student participants focused specifically on the exact same aspects of this definition, I propose the following "student" definition of academic success:

> "Academic success is putting forth effort to improve oneself through the learning and understanding of classroom content to such a level where a 'good' grade is attained."

It must be mentioned that the idea of a 'good' grade is relative as some students want an 'A' in everything, whereas other students may simply want to pass. In phrasing

the definition this way, where it is still somewhat ambiguous and incomplete through saying ‘good’ grade, I am accepting that students may view success, especially with respect to grades, through different lenses with different goals and expectations for themselves.

Though I had intended to share my findings and this final ‘definition’ with student participants, the end of the school year made this not a possibility. That being said, this definition was more or less starting to take shape following the individual interviews, and thus this was somewhat seen in the small group discussions. In doing so, I was able to get some feedback that this definition does seem to fit for all of my student participants, though some did mention that they find some of these aspects to be less important in their views and definitions of academic success. In the chapter that follows, I will discuss how these findings and knowing this definition can and will do for myself personally in my teaching practice, but also how this can be helpful within the field of education.

CHAPTER 5

CONCLUSION

Academic success has never been consistently defined, and even when it has been defined (e.g. Kuh et. al, 2006 ; York et al., 2015), these definitions are not able to be easily measured consistently. This research intended to build upon prior research to address my problem of practice to allow myself, as the classroom teacher, to have a better understanding of how students themselves define academic success. This would then allow me to better create a classroom environment in which my students are able to achieve academic success. Using an intrinsic case study approach, I sought to answer the following research questions:

1. How do students personally define their own academic success?
    a. In what ways do internal factors (e.g. mathematics identity, intrinsic motivation and personal goals) influence students' definitions and understanding of academic success?
    b. In what ways do external factors (e.g. parents, teachers, other students, etc.) influence students' definitions and understanding of academic success?
    c. In what ways do classroom environmental factors (e.g. the teacher, classmates, etc.) influence students' definitions and understanding of academic success?

In trying to address and answer these research questions, self-study and case-study methodologies were used to collect and analyze the data collected. In discussing academic success with my student participants in the data collection phase, it is apparent that there are different aspects that are the focus of different students, often times depending on the class and context of which they are discussing. Regardless of the context all of the student participants utilize all of these various aspects of the definition in some way to shape their definitions and views of academic success. From this research, I have discovered that there are definitely similarities, but many differences in how students view and define academic success than other academic stakeholders. In the sections that follow, I will discuss some of the things that I have learned through this research.

Discussion of Findings

"Academic success is putting forth effort to improve oneself through the learning and understanding of classroom content to such a level where a 'good' grade is attained."

From the data collected, I propose the above definition for academic success based on the views and descriptions collected from my student participants. With grades, or some similar quantitative measurement, being the focus of many stakeholders in education, it came as no surprise to me that grades were listed and discussed often by student participants. I also often used grades as one of my ways to measure and display academic success, but it raises the question of what constitutes a 'good', or conversely 'bad', grade. Higher grades are perceived as better than lower grades (i.e. A vs. B), similar to the comparison of 3.0 and 4.0 GPAs, but there is often the subjective

differences between students views of getting a ‘B’ as a grade. Some students would view this as a ‘good’ grade, while others would view this as a ‘bad’ grade since it could be improved.

There are also inconsistencies within all educational stakeholders, especially in mathematics as some students struggle more with mathematics and find themselves earning lower grades. For many students, these varying views are often based on the personal goals that students set for themselves, as seen in the data provided by my student participants, which is often impacted by what class is being discussed. I understand and admit that grades play a large role within the world of education, and was not overly surprised when grades were discussed within all interviews and small group discussions. That said, I was somewhat surprised by the responses in the Initial ‘Success’ Survey because understanding the material was chosen as an answer more than grades on the Initial ‘Success’ Survey.

Another main aspect of this definition is understanding the content being taught, which is often a goal of many in education. Though it made me happy to see many of my students mentioning understanding as one of their main goals and measures of academic success, it does bring up the question of what does understanding actually look like. In mathematics, understanding is often viewed as the ability to be able to perform mathematical operations and tasks with accuracy, but as a classroom teacher, I know that this is not always the case. I can think of many tests that I have given where the student does not understand what is going on in the class, but because they memorized a process, without understanding why the process is that way and why it works, to get a good grade on the test. Conversely, I have had students that had a good level of understanding of the

material being taught but did not achieve a high grade on the test for various reasons (e.g. I can remember a unit where Becky had a good understanding as we were learning the material through our conversations and work, but then did not perform well on the exam, earning a much lower grade than either of us had expected). It also brings up the question of what does understanding look like and how is it measured without the use of grades? It also brings up the question of whether or not eliminating grades would actually be an option?

I find myself wondering about the relationship between understanding and grades because historically, they have been perceived to be related, but, as seen in the scenarios discussed above, it is not always the case. Similarly, there is the overarching question of which is more important – is it better for students to understand the material or to achieve good grades? As an educator, I want my students to understand the mathematics that I am teaching them, but it is difficult for me to focus solely on understanding and measure understanding without some form of 'grade'. Our educational system does rely on grades to not only 'show' understanding of the material, but also as a measure that is used as students look at college admissions requirements. Only time will tell what changes may come as many colleges and universities are adjusting their admission requirements, which may definitely impact some of the things that I do within my classroom.

Unfortunately, I believe that until we take grades off of the pedestal, understanding will always take a back seat to grades in describing and defining academic success. I will admit that there are times and ways that grades are meaningful measures of student understanding, but there are also other times where this is not the case. I am reminded of one of the main complaints of some of my coworkers where there is

sometimes the feeling that we are ‘teaching to the test’, and focusing on being able to do the correct procedure without needing to understand the process being taught. Even Becky mentioned the possibility of grades and understanding being disjoint in her focus on earning the grade without necessarily caring about understanding (Interview 1). This is causing me to think more about what I am grading and how I am grading things to help align my grading practices to be a better measurement of student understanding in my own teaching practice.

Effort was also often mentioned and discussed by student participants earning it a place in the definition of academic success. As a teacher, I want my students to put forth the effort needed in my class to learn the material and do well, and I can often identify which students in my classes are, or are not, meeting my expectations of what it means to give their full effort. Though I would say that not putting forth effort would be seen as ‘not success’, I cannot say that I have thought that effort alone is a measure of ‘success’. I was pleased that even though effort was viewed and used with different levels of importance in student definitions, none of the student participants focused solely on effort, to the exclusion of these other aspects.

Though 5 of the 12 student participants marked ‘good attendance’ as a way to define success on the Initial ‘Success’ Survey, only one student discussed attendance within their interview, and he wasn’t even one of the 5 that marked it on the Initial ‘Success’ Survey. It is possible that the students that selected this on the survey viewed good attendance as part of their putting forth effort within an academic setting.

Internal Factors

In addressing the first research sub-question, many different internal factors were identified throughout the data collection, including nine of the 12 student participants marked "Myself" as an answer to the question "Who influences your 'definition' of success?". Some students are very internally motivated by the grades, varying from the desire to earn the best grade possible to others that set personal goals for themselves to challenge themselves to continue to learn and succeed through the achievement of 'good' grades. Many students that discussed setting goals for themselves also mentioned that the subject also impacts how high they set the goal for themselves. Though not always directly using the grade as the internal motivation, some students discussed happiness and contentment with grades and final products as internally motivating. Some mentioned that they want to be proud of the work that they have accomplished, while others discussed their internal drive to push and challenge themselves. Regardless of the various internal factors, all of the student participants included various forms of internally motivating factors to help shape their views and definitions of academic success.

Because of previous findings of differences in success in the mathematics classroom (e.g. Voyer & Voyer, 2014), I had thought that gender would possibly have an impact on my student participants' views and definitions of success. That said, I did not find any major differences between my male and female student participants. Among my student participants there were some students that would classify themselves as 'math people' while others did not, but I found no discernable connection between gender and such math identity even though prior research has suggested a possible connection (e.g. Froschl & Sprung, 2016).

External Factors

In addressing the second research sub-question, many different external factors were identified throughout the data collection. Though grades were often discussed as an internally motivating factor, some students discussed grades also as an externally motivating factor. Some students discussed the pressure to achieve good grades and score well on standardized tests, often stating the need to perform for their post-graduation goals of college admittance and scholarship requirements. High school itself was also mentioned as an external factor that impacts and shapes their definitions of academic success, which is not surprising as nine of the 12 student participants indicated "Teacher" as somebody that influences their definition. Some students even mentioned feeling pressured to take honors and Advanced Placement courses throughout their high school career because of the AP culture that has been visible throughout the high school setting that provided the context for the research.

Within the Initial 'Success' Survey, peers and parents were also both selected as external factors as part of their answers to the question "Who influences your 'definition' of success?". Peers was selected by three students with some discussing peers as a source of external motivation through the impetus for there to be some form of competition. On the other hand, some students only seemed to allow friends to have any external impact, while others discussed peers as having minimal impact on their views and definitions of academic success. Family members, most often specifically parents, were also mentioned, usually related to various expectations for grades and performance, though some seemed to try and minimize the impact of this external 'pressure'. Even though most external factors were positive in nature, there were some hindrances that were

discussed in students' abilities to achieve academic success, including: work, extracurriculars, and spending time with friends and family.

Classroom Environment

In addressing the third research sub-question, different aspects of the classroom environment were identified and discussed as impacting the definition of academic success. In their responses to the Initial 'Success' Survey, seven of the 12 student participants selected the teacher as one that influences their definition of academic success. Not only did students discuss differences in teaching styles, but many also mentioned the importance of teachers to reach out to help students who need help, especially in mathematics. The relationship that teachers build with students was also discussed by students in being an important factor in helping students define and achieve academic success. Some students mentioned that the relationship with the teacher was so important to them that they would personally go out of their way to help establish a strong student-teacher relationship. Others also connected this student-teacher relationship with the students' willingness and ability to apply themselves to succeed.

Many students discussed examples of how relationships, or lack thereof, with classmates can impact definitions and attainment of academic success, both positively and negatively. This was seen as some mentioned that knowing people in class may cause themselves to be distracted and not get any work done while others mentioned the positive impact that having relationships with classmates to help challenge and encourage success. Another major classroom influence discussed by some was the idea of learning online with some viewing taking classes and learning online as a hindrance while others

enjoyed the freedom that learning online provided. Some students even discussed the fact that they are more willing and able to apply themselves in the classroom when in-person compared to online, even to the extent that without being in person there is no personal motivation. Not surprisingly, the most commonly listed classroom influence is the actual class itself (i.e. Mathematics vs. PE vs. choir) which is why the current research focused specifically on the mathematics classroom.

The blended learning classroom environment has been found to have pros and cons for students (Horn & Staker, 2014) which may be found to impact students' definitions of academic success in the current study. Knowing this, I purposefully included students from both the 'traditional' and the 'blended' learning environments to see if there were any similarities and differences among student definitions of academic success. In analyzing the data, the main differences I found were related to students discussing how the different classroom environments may impact the achievement of academic success. I did not find any patterns in having different definitions of academic success between these different learning environments.

I had originally thought that the classroom environment of mathematics would cause more data to be collected in relation to mathematics identities (eg. Sfard and Prusak, 2005; Bouchey & Harter, 2005). That being said, the idea of mathematics identities did not arise much beyond some students classifying themselves as 'good' or 'bad' students of mathematics. Some of this was discussed in relation to prior experiences of 'success' or 'failure', but I also found that some of my students discussed how their mathematics identities had changed over time, similar to prior research (e.g. Lynch et. al, 2020). Regardless of the type of classroom (ie. blended vs. 'traditional'),

some students discussed collaboration and the idea of working together vs. working alone as being influential in their academic success, similar to Van Rijsewijk et al. (2018). Many of the students that discussed changes in such views often pointed to examples of the impact and role of the teacher and the classroom environment being integral in making a positive impact. I find myself continuing to wonder how I can continue to establish a learning environment in which all students feel like they can succeed in learning and doing mathematics within my classroom.

Limitations

Within this study, there were a few limitations that should be mentioned and addressed; the first of which is the small sample size of the study. Though qualitative data tends to have smaller sample sizes utilized to collect data, it must be mentioned that the smaller sample size may make it more difficult for the findings of this study to be generalized. It is possible that the results from this study, and the answers provided by my student participants, only apply to these specific students – they may be the exception and not the rule. That being said, I do believe that the sample size from this study, in the long term, is not a major limitation as the findings were similarly echoed through all participants throughout the data collection. Follow up studies may be warranted to help verify and validate the findings of this study while also being able to collect more data to better create a 'big picture' understanding of how students personally define academic success.

Another limitation within this study is my own personal influence on how students responded and provided responses within all stages of the study. The first way

that may have been present is through the fact that I was a classroom teacher for all of the student participants in various mathematics classes during the 2019-2020 and/or 2020-2021 school years prior to their participation in the study. From having the time together within the same classroom, it is possible that my own thoughts, feelings, opinions, etc. of academic success were shared and thus helped shape and form their own definitions. As I would do check-ins with my students throughout our time together, which would often focus on the grade with me asking two main questions: "Do you know where your grade is?" and "Do you like where your grade is?" It is possible that this may have influenced some students in discussing grades within their definition. This is possible, but likely minimal, in influence as our educational system has held grades with high importance for quite some time.

It is also possible that through the wording of questions in all stages of data collection, my own personal biases may have been somewhat present and conveyed unintentionally. Examples of this include: having grade and understanding specifically listed in the Initial 'Success' Survey, along with how I led and guided the interview and small group discussions through not only what questions were asked, but also how they were phrased and brought into the conversations. Because of this, there may have been aspects of students' thoughts and definitions of academic success that were not present within the interviews and discussions causing my findings to have 'gaps' in the results. It is possible that definitions of academic success may include different aspects that were not discussed within the interviews. These could be found in follow up studies, though any follow-up study would likely include a different group of student participants causing differences in student responses.

Implications for Practice

As a classroom educator, by having a better understanding of students' personal definitions of academic success, I will be better able to establish a learning environment that helps promote and foster success. Grades have always held great importance for me personally, and has thus always been held in high esteem within my teaching practice. This has not always been completely intentional, but I must admit that the presence of the importance and pressure on grades as a measure of achievement has tended to be a fairly large importance within my classroom practice, though this may not be a 'good' thing. In talking to my students and being able to learn more about their definitions of academic success, I now have the ability to step back and analyze the things that I am doing, and in some cases, things that I am not doing to better allow myself to establish a learning environment that will help my students find success both in the classroom and beyond.

Other than being more intentional to not completely focus on grades as the sole motivator and mark for success, I find myself interacting with my current students differently. Just a few weeks ago, I did my first check-ins with my current students to see how things are going, and I found myself no longer just asking "Do you know where your grade is? Do you like where your grade is?" Instead, I found myself asking "How are you feeling in this class?" to help keep the conversation open to other aspects of effort, understanding, and how they feel in the class, rather than solely focusing on the grade. Some students did bring up and discuss the grade with me in the midst of our conversations, whether the focus was on their GPA for college/scholarships or simply wanting to make sure that they met their parents' expectations. Though I still understand

that grades are important for various reasons, the results of this research help remind me that not everything is always solely for a quantitative grade as a measure of success.

One of the major changes that I am looking to implement in my teaching practice is the use of grades, specifically what things I grade and how I grade them. I am constantly thinking about how I am giving points and the motivation to grade things in certain ways to help make sure that I am helping assess student understanding. I currently give completion points for completing homework, but I find myself wondering if this is actually helping; it helps make sure that the students are held accountable to at least complete the homework, but it gives no real measurement of understanding. This is something that I will continue to ponder and discuss with colleagues to help better align my grading practices to being meaningful measurements of student understanding. If I want understanding to have an increased focus in my course, I need to help promote this not only within my grading practices but also through the activities I am doing in class. In doing so, I find myself looking for different ways to check for understanding and the ability to give feedback to help my students progress without always feeling the need to put something in the gradebook.

Many have often complained that teachers focus completely on grades and 'teach to the test', especially within mathematics. In my data collection, I had a few students that agreed, claiming that mathematics is sometimes taught with the purpose of learning a process correctly for the test without always any regard for student understanding. I personally find this issue compounded with students asking the question "When am I ever going to use this?", sometimes with no easy or real answer other than the need to know it for an upcoming assessment. Because of this, I find myself being more

purposeful to keep the focus on understanding and making changes to my teaching and grading practices, as stated above. To some extent, this also somewhat echoes some of my student participant statements about the importance for teachers to reach out to help provide extra support for students that are struggling.

Mathematics is definitely a content area that polarizes students in their views of the subject with various mathematics identities. Not only does the subject create differences in views, the teacher and the classroom environment can impact students views of themselves and of mathematics as well. In discussing their feelings about mathematics, some participants mentioned a relationship between the teachers' behaviors and their views of mathematics, similar to Bouchey and Harter (2005). At the beginning of this study, I felt that the classroom environment and my role as the teacher would only impact the achievement of academic success, but I now believe that I can also impact students' definitions of academic success. This makes it crucial for me to create and foster a learning environment in which all of my students believe that they can succeed in mathematics and they can and will, with hard work, achieve a better understanding of the content taught. Even though I know that not all of my students have a passion for mathematics, it is my job to help them to find success and encouragement to continue to challenge and encourage themselves both in my classroom and beyond.

Future Research

The current research, though building off of prior research, does not fill all existing gaps in research while also creating a few more gaps for future research to fill. First of all, like previously stated, the definitions shared by my student participants may

be the exception and not the rule of how students define academic success. Because of this, further study is warranted to verify these findings, possibly through qualitative, quantitative, or even mixed methods research methodology. It is possible that since this research also primarily focused on the mathematics classroom, even though success outside of the mathematics classroom was discussed, similar research projects could be utilized focusing on different content areas to identify how academic success may be viewed differently within different classroom settings. Similarly, the current research only barely scratched the surface of discussing online and blended/hybrid learning settings due to the fact that not all student participants had fully participated in these learning environments, also leading to another potential for future research. Similar future research projects could also be utilized to determine how differences within demographics (i.e. age, ethnicity, SES status, health/disability status, etc.) might impact views and definitions of academic success.

Future research could also be utilized to help identify how different stakeholders in education (i.e. parents, teachers, administrators, etc.) view and define academic success. Though it is likely that these various stakeholders help shape and influence students' definitions, it is possible, and likely, that there may be unique foci of these various stakeholders that can be identified. By being able to understand the similarities and differences writ large between these groups of educational stakeholders, it is possible that we may be able to help bridge the gap between these groups to help promote a consistent definition of academic success. Whether this is done on a large scale involving all groups of stakeholders within one study to help maximize control over similar variables (i.e. what school or district these stakeholders represent, the year – as

time could be impacted by state and national educational changes, etc.) or taken within different studies that focus specifically on one group, the findings could still be useful in helping better understand what is meant when we say 'academic success'.

Final thoughts

As a student, I always personally defined success through having high academic achievements, namely grades. The motivation to strive for 'good' grades was impacted by the desire to do well for college/scholarships, along with the comparing of achievement with friends, family, and to some extent, with myself. I personally believe that intentional or not, the focus of grades was, and continues to be, perpetuated through the educational system itself. As an educator, I find myself at times putting a large emphasis on the grades and doing well on various assignments, projects, and assessments to measure my students' success. Whether this is a good thing or a bad thing is still not fully known, but in my research and conversations with student participants, I feel that grades can be a good thing as long as they are true measurements of student understanding. Even though many students continue to hold grades as part of how they view and define academic success, I am hoping that my students can look beyond just the goal of achieving a specific grade as I challenge and encourage them to gain more mathematical understanding to apply the content even outside of my classroom.

As a teacher, we all want our students to do 'well', but that is a very weighted statement that is often hard to consistently measure and define. For some students, especially within mathematics classes, they are thrilled just to pass the class and get the credit while others work day and night to earn the very best grade possible, or at least the

best grade that they can achieve. This dichotomy is furthered through the pressure of grades, causing many students undue stress and aggravation with a subject that they will have to utilize, at least to some extent, throughout the course of their lives. If grades were not the complete focus, would it help lead to students not feeling pressure and stress that sometimes gives them the 'need' or desire to cheat? Would it help students to focus more on understanding the material, making it more meaningful for them both in the present and in the future? I am not trying to argue that we completely do away with grades, as it often would raise even more questions and potential issues to address, but I feel like this is something that we as educators need to be aware of and discussing.

As an educator, I want my students to find success in the classroom, which does involve many of the aspects that students discussed. I want them to earn 'good' grades and do well in my class, but I also want them to be able to understand the material being taught because without any understanding, they are simply 'learning' it for a test and then just discarding any of that information directly following the test. I also want my students to continue to work hard and not give up – I want them to learn perseverance as not everything in life is easy, but that they can overcome many obstacles in life through effort. I want my students to be self-aware enough to be able to not only notice that they are lacking in understanding and need help, but are also willing and able to put forth the effort to get help and ask questions when needed. Lastly, I also want my students to feel like they have succeeded and be able to achieve some self-gratification through their accomplishments in taking my class as they pursue whatever their final goal may be in life.

This research has helped me better understand one of the big questions that I have had recently in helping investigate how students define academic success. Even though I have proposed a new definition of academic success, I will be the first to admit that there is still much work that can be done in helping analyze and define academic success. Some of the questions that brought me to my problem of practice still remain, at least to some extent, unanswered (e.g. What constitutes a good grade and what should be grade? Is understanding shown by simply completing academic tasks?). I do not see this as a major problem, but instead as room for continual growth as I continue to learn and apply what I have learned through this study.

Now, I look to the future to see how applying this knowledge can help me as an educator better prepare my students for success in the classroom. I don't think the whole of education will change overnight, nor do I necessarily think it should, but I know that I can apply this to help continue to improve my teaching practice. By better understanding how students define success, I feel that I am more able to help promote student success in these various forms to help not only motivate, but to also challenge and encourage my students to find success within my mathematics classroom. Only time will tell what fully comes as result of this study, but I am excited to see what this mutual understanding can do for myself and my students as we work together to achieve academic success.

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APPENDIX A - Initial 'Success' Survey

Please respond to these few questions regarding your experiences and thoughts that define academic success.

1. What grade are you in?
   - o Freshman
   - o Sophomore
   - o Junior
   - o Senior

2. What is your current GPA?
   - o Less than 1.0
   - o Between 1.0 and 2.0
   - o Between 2.0 and 3.0
   - o Between 3.0 and 4.0

3. What are ways that you 'define' success?
   - o 'Good grades'/GPA
   - o Understanding the material
   - o Good attendance
   - o Other: Explain _____

4. Who influences your 'definition' of success?
   - o Myself
   - o Peers
   - o Parents
   - o Teachers
   - o Other: Explain _____

APPENDIX B - Interview Protocols

Interview Protocol 1

Initial Interview:

The purpose of this initial semi-structured interview is to allow student participants to share ideas, interests, understanding, and thoughts with regards to their understanding of academic success, especially with regard to the specific learning environment they are a part of.

The principal investigator will review the purpose of the study with each student participant in conversational language, including, but not limited to, the information given below.

> *I am interested in learning more about how academic success is defined and measured, especially by students themselves. As an educator, I understand that 'success' is viewed differently by various groups of people (eg. students, teachers, administrators, etc.), and I am wanting to understand more from the perspectives of students in the mathematics classrooms.*

The interview questions listed are meant to be open-ended and discussed through conversational manners. Not all questions need to be asked in this initial interview and the phrasing of the questions listed may be altered to ease flow of the conversation.

Additional questions may be asked to allow the student participants to further expand or explain their responses.

1. How would you describe yourself as a student and how would you describe yourself as a math student?
2. How much time do you spend outside of class on homework, studying, etc.? What impacts this amount of time?
3. How do you 'define' success in the classroom (academic success)?
4. Can you give an example of a time that you 'succeeded' in any classroom setting?
5. Can you give an example in which you didn't 'succeed' in the classroom?
6. Who or what influences your 'definition' of success, especially in the mathematics classroom?
7. How does your 'definition' of success in the classroom change in different settings (different content areas, different classroom types, etc.)?
8. Is there anything else that you would like to share about academic success?

Interview Protocol 2

Follow-up Small Group Discussion:

The goal of the follow-up semi-structured small group discussion is to enable the researcher to clarify aspects observed/shared in the observations and interviews within small groups of students from the traditional and blended classroom settings to allow the students to help co-create a 'definition' of academic success.

The principal investigator will review the purpose of the study with each student participant in conversational language, including, but not limited to, the information given below.

Thank you for taking the time to participate in a follow-up small group discussion. As you all know, the purpose of this research is to better understand how students 'define' academic success. I have some follow-up questions that have risen from observations of the classroom environment and the original interview responses. I would love your insight to help clarify and increase understanding of this information to help better compare/contrast the definitions of success.

The interview questions listed are meant to be open-ended and discussed through conversational manners. Not all questions need to be asked in the interview and the phrasing of the questions may be altered to ease flow of the conversation.

The questions for this small group discussion are not predetermined (as no data has been collected, no observations utilized, etc.), but some examples of the types of open-ended questions that may be asked are provided below.

1. Based on the aspects that you use to 'measure' success in the classroom, which of them is/are the most important?
    a. Using aspects discussed in the Initial 'Success' Survey and responses from the individual interviews, participants will rank the various factors that they use to 'define' and 'measure' academic success.
2. How do peers, parents, teachers, etc. impact your view of success?
3. How does the classroom environment impact your view of success and/or the ability to succeed?
4. In a mathematics class, when/how do you know that you understand the content being taught?
5. What are things that prevent you from achieving success in the classroom, specifically in the mathematics classroom?

APPENDIX C - Student Assent Form

University of Nebraska Lincoln

COLLEGE OF EDUCATION AND HUMAN
Department of Teaching, Learning and Teacher

Student Assent Form

IRB#: 20854

Title: Students' Definitions of Academic Success

Key Information:

If you agree to participate in this study, the project would involve:

- Students, both male and female, from College Algebra and AP Statistics courses
- 1 Initial 'Success' Survey
  (Note: All students that agree to participate in this study will complete the Initial 'Success' Survey as a level of screening to assist in the purposeful sample selection of 12-15 students. Only students selected for the project will participate in the interviews and small group discussions.)

If you are selected to be part of the sample of 12-15 students, the project will also involve:

- 1-2 One-on-one interviews
  - It is possible that student artifacts (ie. tests, quizzes, etc.) may be discussed and analyzed within the interview as possible examples/counterexamples of definitions and responses provided by students and to help the interviewer better understand the thoughts being shared by the student. These will only be potentially discussed during the interview and will not be kept or stored as part of the data for this research project.
- 1-2 Small group discussion with approximately 4-7 students
  (Note: All interviews and small-group discussions will be recorded and stored with password protected on a secure device.)
- These interviews and small group discussions will take approximately 3 hours total
- The study will take place during the Spring semester of the 2020-2021 school year
- There are no risks anticipated with this study
- You will be provided a copy of this consent form

Why are you being asked to be in this research study?

You are being invited to be in this study because you were enrolled in College Algebra or AP Statistics during the 2019-2020 school year or during the 2020-2021 school year.

What will be done during this research study?

This research will consist of three main activities, that are intended to take no more than 2 hours of your time. First, the Initial 'Success' Survey will take a few minutes to assist in helping you begin to think about how you define academic success. Then an interview will be conducted one-on-one for approximately 45 minutes to an hour to gain more information into how you personally view and define academic success. A follow-up interview may be deemed necessary depending on time and to verify answers, findings, etc. as needed. Finally, a small group discussion, of approximately 4-7 students, will be conducted for approximately 45-90 minutes, again with the potential of a follow-up being deemed necessary, though unlikely.

What are the possible risks of being in this research study?
There are no known risks to you from being in this research study.

What are possible benefits to you?
Being in the study will not have direct benefits to you, but it may help researchers and teachers better understand how students define academic success. In addition, you may learn more about how you define academic success to help you better 'succeed' both now and in the future.

Will you be compensated for being in this research study?
There will be no compensation for participation in this study.

How will information about you be protected?
Reasonable steps will be taken to protect your privacy and the confidentiality of your study data using pseudonyms. We may publish a summary of responses or present such a summary at an educational convention, but your identity and responses will be kept completely confidential.

What will happen if you decide not to be in this research study or decide to stop participating once you start?
You can decide not to be in this research study, or you can withdraw from the study at any time before, during, or after the research begins for any reason.

Documentation of informed consent
We will also ask your parents/legal guardian for their permission for you to do this study.
Please talk this over with them before you decide whether or not to participate. If you have any questions at this time, please ask one of the researchers.

Participant Signature:

_____ _____
(Signature of Participant) (Date)

Investigator Signature:

_____ _____
(Signature of Investigator) (Date)

Please note that you will be contacted after completing the Initial 'Success' Survey if you are selected to participate in the full study.

Authorized Study Personnel
Principal Investigator: Brent Kelderman, MAT Office: (402) 715-6000
Secondary Investigator: Stephanie Wessels, Ph. D. Office: (402) 472-2231

APPENDIX D - Parental Consent Form

COLLEGE OF EDUCATION AND HUMAN SCIENCES
Department of Teaching, Learning and Teacher Education

Parent Informed Consent Form

IRB#: 20854

Title: Students' Definitions of Academic Success

Invitation:
Dear parent/guardian,

Thank you for allowing me to present this opportunity to you and your child. My name is Brent Kelderman and I am currently a doctoral student in the Teaching, Learning, and Teacher Education department at the University of Nebraska – Lincoln and a mathematics teacher at Millard West High School. I am conducting a study that will include an introductory survey, one-on-one student interviews, and small group discussions with other students at Millard West High School. The purpose of this study is to investigate how students define academic success in the mathematics classroom.

Your child is invited to take part in this research study. The information provided in this form is intended to help you decide whether or not they may participate, and the students will also have a choice to participate or not. I am not wanting to place any undue pressure or stress on you or your student in deciding whether or not to participate in the study. If you have any questions, please ask.

Key Information:
If you agree that your child may participate in this study, the project would involve:

- Students, both male and female, from College Algebra and AP Statistics courses
- 1 Initial 'Success' Survey
  (Note: All students that agree to participate in this study will complete the Initial 'Success' Survey as a level of screening to assist in the purposeful sample selection of 12-15 students. Only students selected for the project will participate in the interviews and small group discussions.)

If your child is selected to be part of the sample of 12-15 students, the project will also involve:

- 1-2 One-on-one interviews o It is possible that student artifacts (ie. tests, quizzes, etc.) may be discussed and analyzed within the interview as possible examples/counterexamples of definitions and responses provided by students and to help the interviewer better understand the thoughts being shared by the student. These will only be potentially discussed during the interview and will not be kept or stored as part of the data for this research project.
- 1-2 Small group discussion with approximately 4-7 students
  (Note: All interviews and small-group discussions will be recorded and stored with password protected on a secure device.)
- These interviews and small group discussions will take approximately 3 hours total
- The study will take place during the Spring semester of the 2020-2021 school year
- There are no risks anticipated with this study
- You will be provided a copy of this consent form
- Participation is voluntary and you can decide to not let your child participate at any time

Why is your child/legal ward being asked to be in this research study?
Your child/legal ward is being invited to be in this study because they were enrolled in College Algebra or AP Statistics during the 2019-2020 school year or are currently enrolled in either of those classes during the 2020-2021 school year.

What is the reason for doing this research study?
The purpose of the project is to investigate how students define academic success to compare how these definitions may change across different learning environments. I believe that by understanding how students define success, teachers can be better prepared to help students achieve success within their respective learning environments.

What will be done during this research study?
This research will consist of three main activities, that are intended to take no more than 2-3 hours of your time. First, the Initial 'Success' Survey will take a few minutes to assist in helping you begin to think about how you define academic success. Then an interview will be conducted one-on-one for approximately 45 minutes to an hour to gain more information into how you personally view and define academic success. A follow-up interview may be deemed necessary depending on time and to verify answers, findings, etc. as needed. Finally, a small group discussion, of approximately 4-7 students, will be conducted for approximately 45-90 minutes, again with the potential of a follow-up being deemed necessary, though unlikely.

What are the possible risks of being in this research study?
There are no known risks to you from being in this research study.

What are possible benefits to your child/legal ward?
Your child/legal ward may learn a little more about how they define academic success to help them better 'succeed' both now and in the future.

What are the possible benefits to other people?
This research study may help researchers and teachers better understand how students personally define academic success.

What are the alternatives to being in this research study?
Instead of being in this research study you can choose not to allow your child/legal ward to participate.

What will being in this research study cost you or your child/legal ward? There is no cost to you or your child/legal ward to be in this research study.

Will your child/legal ward be compensated for being in this research study?
We will not pay you or your child/legal ward to take part in this study or pay for any out of pocket expenses related to participation, such as travel costs.

What should you do if your child/legal ward has a problem during this research study?
Your child/legal ward's welfare is a major concern of every member of the research team. If there is a problem as a direct result of being in this study, you should immediately contact one of the people listed at the beginning of this consent form.

How will information about your child/legal ward be protected?
Reasonable steps will be taken to protect your privacy and the confidentiality of your child/legal ward's study data; however, in some circumstances we cannot guarantee absolute privacy and/or confidentiality.

The research records will be securely stored electronically through University approved methods and will only be seen by the research team and/or those authorized to view, access, or use the records during and after the study is complete.

Those who will have access to your child/legal ward's research records are the study personnel, the Institutional Review Board (IRB), and any other person, agency, or sponsor as required by law or contract or institutional responsibility. The information from this study may be published in scientific journals or presented at scientific meetings and may be reported individually, or as group or summarized data but your child/legal ward's identity will be kept strictly confidential.

What are your child/legal ward's rights as a research subject?
Your child/legal ward may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. For study related questions, please contact the investigator(s) listed at the beginning of this form. For questions concerning your rights or complaints about the research contact the Institutional Review Board (IRB):

- Phone: (402) 472-6965
- Email: irb@unl.edu

As the parent/legal guardian providing consent, you have the right to review the surveys related to this research before providing consent to participate. To do so, please contact the investigator(s) listed at the beginning of this form.

What will happen if you decide not to allow your child/legal ward to be in this research study or decide they need to stop participating once they start?
You can decide your child/legal ward should not to be in this research study, or you can have your child/legal ward withdraw from this research study at any time before, during, or after the research begins for any reason. Deciding not to allow your child/legal ward to be in this research study or deciding to withdraw will not affect you or your child/legal ward's relationship with the investigator or with the University of Nebraska-Lincoln or Millard West High School.

You and your child/legal ward will not lose any benefits to which you are entitled.

Documentation of informed consent
You are voluntarily making a decision whether or not to allow your child/legal ward to be in this research study. Signing this form means that (1) you have read and understood this consent form, (2) you have had the consent form explained to you, (3) you have had your questions answered, (4) you have decided to allow your child/legal ward to be in the research study and (5) you are legally authorized to consent to the child/legal ward's participation. Be aware that a foster parent is typically not legally authorized to consent for a foster child's participation in research. You will be given a copy of this consent form to keep.

Participant Feedback Survey

The University of Nebraska-Lincoln wants to know about your research experience. This 14 question, multiple-choice survey is anonymous. This survey should be completed after your participation in this research. Please complete this optional online survey at: http://bit.ly/UNLresearchfeedback.

Parent Notification Form

I have read the information about the research being conducted by the University of Nebraska-Lincoln. Please check the respective box below indicating whether or not you want your child/legal ward to take part in the research.

	My child **does** have permission to participate.
	My child does **not** have permission to participate.

Name of student _____ Grade _____

Printed Name of parent/guardian _____

Signature of parent/guardian _____ Date _____

Please have your child/legal ward return this form to his/her teacher by March 21.

Thank you so much for your assistance with this important project. If you have questions or concerns about your rights as a study participant that have not been answered by the investigators, or to report any concern about the project, please contact the University of Nebraska-Lincoln Institutional Review Board at 402-472-6965.

Please note that your child will be contacted after completing the Initial 'Success' Survey if they are selected to participate in the full study.

Authorized Study Personnel

Principal Investigator: Brent Kelderman, MAT Office: (402) 715-6000

Secondary Investigator: Stephanie Wessels, Ph. D. Office: (402) 472-2231

APPENDIX E - District Approval Form

Millard PUBLIC SCHOOLS

Don Stroh Administration Center · 5606 So. 147th Street · Omaha, NE 68137-2647 · (402) 715-8200 · (Fax) (402) 715-8409

To: Brent Kelderman

From: Sharon Freeman

Department of Assessment, Research, and Evaluation

CC: Dr. Heather Phipps, Dr. Tony Weers, Andy DeFreece, Dr. Terry Houlton, and Dr. Darin Kelberlau

Date: February 5, 2021

Re: Request to conduct research in Millard Public Schools

In accordance with MPS Rule 6900.1, this notification qualifies as our approval for you to conduct research in Millard Public Schools **under the following provisions**:

- ❑ The principal agrees to your study.
- ❑ Students and parents are notified of their right to opt out of the study, any instrument(s) included in the study, or any item on the instrument(s).
- ❑ Your study follows the structure outlined in your request.
- ❑ Data security is ensured (locked files and/or password protection) and all personally identifiable information from educational records is destroyed when the information is no longer needed for the purposes of this project.
- ❑ Please note conducting research does not override existing district or building rules and policies.
- ❑ Upon completion of the study, you will provide the principal and the Department of Assessment, Research, and Evaluation with a summary of findings and, if applicable, a complete report of procedures and findings.

Thank you for completing the application process. We look forward to reading your results.

Sharon A Freeman

Research Associate - Department of Assessment, Research, and Evaluation
Millard Public Schools

APPENDIX F - Field Notes

BK Notes – Becky

Personal views/recollections from Becky in class:

- Nice and polite student
- Hard working student
- Willing to ask questions/get help when needed
- Slow test taker – perfectionist?
- Doesn't seem to fully care what classmates think about her
- Very grade focused
- Math is not one of her favorite subjects

Initial 'Success' Survey responses:

1. What grade are you in?

   Senior
2. What is your current GPA?

   Between 3.0 and 4.0
3. What are ways that you 'define' success?

   Good grades/GPA

   Understanding the material
4. Who influences your 'definition' of success?

   Myself

   Peers

Interview #1

1. How would you describe yourself as a student and how would you describe yourself as a math student?

In general:

- Hard working and dedicated

In math:

- More focus on getting it done v. understanding
- Used resources to help math homework

2. How much time do you spend outside of class on homework, studying, etc.? What impacts this amount of time?

- Many hours each night
- Distractions impact time (phone)

3. How do you 'define' success in the classroom (academic success)?

- Understanding is part – remembering math for test
- Good grades (A's)

4. Can you give an example of a time that you 'succeeded' in any classroom setting?

5. Can you give an example in which you didn't 'succeed' in the classroom?

- In non-math – AP Government and politics (2)

6. Who or what influences your 'definition' of success, especially in the mathematics classroom?

- Self-conscious – slow test taker
- Not much of focus of comparing grades with peers

7. How does your 'definition' of success in the classroom change in different settings (different content areas, different classroom types, etc.)?

8. Is there anything else that you would like to share about academic success?

BK Notes – John

Personal views/recollections from John in class:

- Nice and polite student
- Doesn't seem to like math
- Doesn't seem to put in a lot of effort
- Athlete – almost 'stereotypical' athlete
- Doesn't seem to care what other people think about him
- Willing to ask questions when needed
- Seems to only care about grades because of parents

Initial 'Success' Survey responses:

1. What grade are you in?

   Senior
2. What is your current GPA?

   Between 3.0 and 4.0
3. What are ways that you 'define' success?

   Good grades/GPA
4. Who influences your 'definition' of success?

   Myself

Interview #2

1. How would you describe yourself as a student and how would you describe yourself as a math student?

In general:

- 'OK' student
- A's and B's mostly

2. How much time do you spend outside of class on homework, studying, etc.? What impacts this amount of time?

Not much – only have two classes right now

Impacts of time

- Sports
- Job
- Motivation (no drive)

3. How do you ‘define’ success in the classroom (academic success)?

- Good grades (A or B) in classes that I’m ‘good at’
    - In math, more difficult – so success is passing

4. Can you give an example of a time that you ‘succeeded’ in any classroom setting?

In math – B in math junior year – worked hard

In non-math – good grades on presentations

5. Can you give an example in which you didn’t ‘succeed’ in the classroom?

In math – Sophomore year got a D

6. Who or what influences your ‘definition’ of success, especially in the mathematics classroom?

Parents – push for best

Peers – pressure to graduate, future

Football eligibility

7. How does your ‘definition’ of success in the classroom change in different settings (different content areas, different classroom types, etc.)?

8. Is there anything else that you would like to share about academic success?

Happiness

BK Notes – Joe

Personal views/recollections from Joe in class:

- Nice and polite student
- Doesn't seem to like math
- Doesn't seem to put in a lot of effort
- Athlete – almost 'stereotypical' athlete
- Doesn't seem to care what other people think about him
- Willing to ask questions when needed
- Seems to only care about grades because of parents

Initial 'Success' Survey responses:

1. What grade are you in?

   Senior
2. What is your current GPA?

   Between 3.0 and 4.0
3. What are ways that you 'define' success?

   Understanding the material
4. Who or what influences your 'definition' of success in the mathematics classroom?

   Teachers

Interview #3

1. How would you describe yourself as a student and how would you describe yourself as a math student?

In general:

- Pretty hard working
- Enjoy being at school – like some classes
- Auditory learner

In math:

- Could work harder outside of class

2. How much time do you spend outside of class on homework, studying, etc.? What impacts this amount of time?

About half an hour each day

Impacts of time

- Depends on class/grade
- Depends on due date of assignment
- Extracurriculars (wrestling)

3. How do you 'define' success in the classroom (academic success)?

- Knowing the material to be able to take it with you
    - Understanding and remembering
- Grade

4. Can you give an example of a time that you 'succeeded' in any classroom setting?

In math – College Algebra

In non-math – 'B' in English 11

5. Can you give an example in which you didn't 'succeed' in the classroom?

In non-math – PSP – could have had better grade (was C or D) – effort

6. Who or what influences your 'definition' of success, especially in the mathematics classroom?

Dad

College

7. How does your 'definition' of success in the classroom change in different settings (different content areas, different classroom types, etc.)?

8. Is there anything else that you would like to share about academic success?

BK Notes – Victoria

Personal views/recollections from Victoria in class:

- Had previous relationship with student from our theatre program prior to being in my class
- Nice and polite student
- Hard working student
- Willing to ask questions/get help when needed – often would first go to classmates and other students around her before coming to me
- Tries to 'fly under the radar' in class, but I think my prior relationship with her impacted her actions in class
- Works hard to get good grades but never seemed to stress on the grade – more of her stress and frustrations tended to revolve around making sure that she understood the content/material being taught so she could do well in class

Initial 'Success' Survey responses:

1. What grade are you in?

   Senior
2. What is your current GPA?

   Between 3.0 and 4.0
3. What are ways that you 'define' success?

   Understanding the material
4. Who influences your 'definition' of success?

   Teachers

Interview #4

1. How would you describe yourself as a student and how would you describe yourself as a math student?

In general:

- Working hard/studying
- Try to focus
- Studious – do the work

In math:

- Less studying and more practice work

2. How much time do you spend outside of class on homework, studying, etc.? What impacts this amount of time?

About half an hour each day

Impacts of time - life

- Depends on material – whether or not understanding is there
- Extracurriculars (show choir, theatre)
- Work
- Friends and family

3. How do you 'define' success in the classroom (academic success)?

- Understanding the material
- Being happy with the grade
- How hard you work – work ethic

4. Can you give an example of a time that you 'succeeded' in any classroom setting?

In math – times when didn't understand but then figured out how to do it by self

In non-math – Contemporary literature – essay at end of book – happy with it/result

5. Can you give an example in which you didn't 'succeed' in the classroom?

In non-math – Government – bad tests

6. Who or what influences your 'definition' of success, especially in the mathematics classroom?

Self – 'drive'

Teacher – look at tests

Students sometimes

7. How does your 'definition' of success in the classroom change in different settings (different content areas, different classroom types, etc.)?

Mostly the same in other settings

8. Is there anything else that you would like to share about academic success?

Can't succeed if not trying – work as hard as you can

BK Notes – Mike

Personal views/recollections from Mike in class:

- Nice and polite student
- Hard working student
- Very relational – with students and myself to help create a 'support' structure to help/answer questions as needed
- Worked hard to understand the material and get good grades, but never seemed fully focused on the grade.

Initial 'Success' Survey responses:

1. What grade are you in?

   Senior
2. What is your current GPA?

   Between 3.0 and 4.0
3. What are ways that you 'define' success in the mathematics classroom?

   'Good grades'/GPA

   Understanding the material

   Good attendance
4. Who or what influences your 'definition' of success in the mathematics classroom?

   Myself

   Parents/Family

   Teachers

Interview #5

1. How would you describe yourself as a student and how would you describe yourself as a math student?

In general:

- Hard-working
- Responsible
- Trustworthy
- Study habits

In math:

- Math comes easy (working with #s)

2. How much time do you spend outside of class on homework, studying, etc.? What impacts this amount of time?

One to two hours a day

Impacts of time

- Long lesson or if struggle = more time
- Working too much (set limits)

3. How do you 'define' success in the classroom (academic success)?

- Self-satisfaction, but also trying best
- Not just a grade, but also understanding

4. Can you give an example of a time that you 'succeeded' in any classroom setting?

In math – Pre-calc final – edge of 2 and 3 – worked hard

In non-math – Chemistry – science is hard but raised grade C to B on final (worked hard)

5. Can you give an example in which you didn't 'succeed' in the classroom?

In math – Geometry – struggled

In non-math – Freshman English – lacked study habits

6. Who or what influences your 'definition' of success, especially in the mathematics classroom?

Self – goal setting

Parents – motivation

Teacher – relationships

7. How does your 'definition' of success in the classroom change in different settings (different content areas, different classroom types, etc.)?

Higher goal for things good at

8. Is there anything else that you would like to share about academic success?

Hard work

BK Notes – Nicole

Personal views/recollections from Nicole in class:

- Had previous relationship with student from homeroom prior to being in my class
- Nice and polite student
- Hard working student
- Willing to ask questions, at times, but also tries to avoid 'looking stupid'
- Works hard to get good grades – somewhat hard to tell what her motivation for grades is: Is it internal? Is it competition with younger sister? Is it parental influence?

Initial 'Success' Survey responses:

1. What grade are you in?

   Senior
2. What is your current GPA?

   Between 3.0 and 4.0
3. What are ways that you 'define' success?

   'Good grades'/GPA

   Understanding the material

   Good attendance
4. Who influences your 'definition' of success?

   Myself

   Peers

   Parents/Family

   Teachers

Interview #6

1. How would you describe yourself as a student and how would you describe yourself as a math student?

In general:

- Hard-worker
- Motivation depends on subject/assignment
- Parental motivation – grades motivation

2. How much time do you spend outside of class on homework, studying, etc.? What impacts this amount of time?

A half an hour on average

Math more than other subjects

3. How do you ‘define’ success in the classroom (academic success)?

- Not just grade
- Doing ‘best’
    - Not minimal effort
- Understanding the material

4. Can you give an example of a time that you ‘succeeded’ in any classroom setting?

In math – Desmos project

In non-math – Job interview and speeches freshman year

5. Can you give an example in which you didn’t ‘succeed’ in the classroom?

In math – tests – knew how to do it, but without notes, hard to remember on test

6. Who or what influences your ‘definition’ of success, especially in the mathematics classroom?

Parents – want to do best

Peers – yes and no to influencing definition

7. How does your ‘definition’ of success in the classroom change in different settings (different content areas, different classroom types, etc.)?

Normally a good grade is a 2 or better (A or B)

In math, the bar is not set quite so high

8. Is there anything else that you would like to share about academic success?

BK Notes – Raven

Personal views/recollections from Raven in class:

- Nice and polite student
- Very quiet/reserved student
- Seemed to work hard throughout class, but struggled to understand parts of the content
- Didn't fully seem willing to ask questions, but would more likely talk to those around her
- Math did not seem like a strong subject

Initial 'Success' Survey responses:

1. What grade are you in?

   Senior
2. What is your current GPA?

   Between 3.0 and 4.0
3. What are ways that you 'define' success?

   Good attendance

   Other: Pleasing yourself
4. Who influences your 'definition' of success?

   Myself

   Parents/Family

Interview #7

1. How would you describe yourself as a student and how would you describe yourself as a math student?

In general:

- Hands-on learner
  - Visual and note taking is more difficult
- Want to please parents – make them proud

In math:

- Struggle more in math – push self to be 'average'

2. How much time do you spend outside of class on homework, studying, etc.? What impacts this amount of time?

A half an hour on average

3. How do you ‘define’ success in the classroom (academic success)?

- Not just pleasing others – push self beyond expectations
    - More proud and pleased when meeting expectations

4. Can you give an example of a time that you ‘succeeded’ in any classroom setting?

In non-math – Law studies

5. Can you give an example in which you didn’t ‘succeed’ in the classroom?

In math – Geometry – not good with shapes

In non-math – Physics – teacher didn’t do much

6. Who or what influences your ‘definition’ of success, especially in the mathematics classroom?

Mom – she sees effort and challenges

Brother – role model – ‘average’ in high school but did well in college

7. How does your ‘definition’ of success in the classroom change in different settings (different content areas, different classroom types, etc.)?

In-person learner

8. Is there anything else that you would like to share about academic success?

Effort

BK Notes – Ralph

Personal views/recollections from Ralph in class:

- A very non-traditional student who had been 'homebound' for health reasons the three years prior to being in my class
- Nice and polite student
- Somewhat hard working – sometimes would work hard, but other times would seem to give minimal effort
- Very willing to be vocal in getting help and asking questions when he didn't understand
- Didn't seem to care what others thought about him
- Never seemed to fully care about the grade as long as it was passing and parents were happy

Initial 'Success' Survey responses:

1. What grade are you in?

   Senior
2. What is your current GPA?

   Between 2.0 and 3.0
3. What are ways that you 'define' success?

   'Good grades'/GPA

   Understanding the material
4. Who influences your 'definition' of success?

   Myself

   Parents/Family

   Teachers

Interview #8

1. How would you describe yourself as a student and how would you describe yourself as a math student?

In general:

- Engaged
  - Ask and answer questions - participate

In math:

- Struggle more in math – ask more questions

2. How much time do you spend outside of class on homework, studying, etc.? What impacts this amount of time?

An hour/hour and a half on average – don't do much studying (doesn't help)
Work impacts time

3. How do you 'define' success in the classroom (academic success)?

- Actually learning/progressing
- Trying best
    - Don't need an A but not getting an F

4. Can you give an example of a time that you 'succeeded' in any classroom setting?

In math – College Algebra – good grade semester 1 and raised grade semester 2
In non-math – AP Environmental science – semester 1 got 90+%

5. Can you give an example in which you didn't 'succeed' in the classroom?

In math – First part of semester 2 College Algebra was a struggle
In non-math – Digital design – following and understanding directions

6. Who or what influences your 'definition' of success, especially in the mathematics classroom?

Grade system
Parents/teachers – pressure to achieve

7. How does your 'definition' of success in the classroom change in different settings (different content areas, different classroom types, etc.)?

Choir – less of grade factor
Math – grade causes struggles
Blended makes a difference – ability to control pace to not hinder others (or be hindered)

8. Is there anything else that you would like to share about academic success?

As long as I'm happy and not stressed out
Being content with grade/product

BK Notes – MJ

The recording of this interview did not save – therefore there is no transcript of this interview, only these field notes that were written down during the interview.

Personal views/recollections from MJ in class:

- Had previous relationship with student from our theatre program prior to being in my class
- Nice and polite student
- Hard working student
- Willing to ask questions and get help when understanding was lacking
- Worked hard to get good grades – somewhat unsure if grades were completely the focus/desire

Initial 'Success' Survey responses:

1. What grade are you in?

   Senior
2. What is your current GPA?

   Between 3.0 and 4.0
3. What are ways that you 'define' success in the mathematics classroom?

   'Good grades'/GPA

   Understanding the material
4. Who or what influences your 'definition' of success in the mathematics classroom?

   Myself

   Parents/Family

   Teachers

Interview #9

1. How would you describe yourself as a student and how would you describe yourself as a math student?

In general:

- Self-driven
- Success relies on self-guidelines and self-regulation

In math:

- Push for understanding since math is 'weakest' subject

2. How much time do you spend outside of class on homework, studying, etc.? What impacts this amount of time?

An hour on average

Proximity to test impacts time – but it is hard to study for math

3. How do you 'define' success in the classroom (academic success)?

- Quantitative (focus of family)
    - Grades/GPA (focus of college)
- Collaboration
    - Being able to explain it
- Understanding
    - Can I do it by myself?
    - How does it relate to world?

4. Can you give an example of a time that you 'succeeded' in any classroom setting?

In non-math – AP Psych research paper – surprised by ability and grade

5. Can you give an example in which you didn't 'succeed' in the classroom?

In math – AP Stats final and AP exam – didn't go well

Knew wasn't prepared and lacked foundational knowledge and understanding

6. Who or what influences your 'definition' of success, especially in the mathematics classroom?

College (focus on quantitative)

Want to do well for the sake of doing well

Self-driven – in personal 'nature'

7. How does your 'definition' of success in the classroom change in different settings (different content areas, different classroom types, etc.)?

English – achievement is not an issue

STEM is not the best

Not being in-person means no motivation

8. Is there anything else that you would like to share about academic success?

BK Notes – Sally

Personal views/recollections from Sally in class:

- Nice and polite student
- Hard working student
- Willing to ask questions and get help when needed
- Grades seem to be a fairly high priority – not to replace the need for understanding, but I feel grades were more important than understanding

Initial 'Success' Survey responses:

1. What grade are you in?

   Senior
2. What is your current GPA?

   Between 3.0 and 4.0
3. What are ways that you 'define' success?

   'Good grades'/GPA

   Understanding the material

   Good attendance
4. Who influences your 'definition' of success?

   Myself

   Parents/Family

   Teachers

Interview #10

1. How would you describe yourself as a student and how would you describe yourself as a math student?

In general:

- Visual learner
- Easy going – work well with others
- Study – need to apply self
- Achiever – not a 'bad student'

In math:

- No different
- Views self as a 'math person'

2. How much time do you spend outside of class on homework, studying, etc.? What impacts this amount of time?

About 30 minutes a day (but depends)

Impacts:

- Material – lack of understanding
- 'Life' – work
- Motivation and procrastination
- Want good grades – want to meet parent expectations

3. How do you 'define' success in the classroom (academic success)?

- Understanding (while getting the grade)
    - More emphasis on understanding
- No effort = no success

4. Can you give an example of a time that you 'succeeded' in any classroom setting?

In math – AP Stats – even though grade fluctuated still understood

In non-math – Yearbook – apply skills to write and communicate

5. Can you give an example in which you didn't 'succeed' in the classroom?

In non-math – English – the Great Gatsby – did not understand

6. Who or what influences your 'definition' of success, especially in the mathematics classroom?

Dad – "control effort and attitude" – need to feel good about it and understand

With respect to grades more self-accountable, but also reassurance from parents

7. How does your 'definition' of success in the classroom change in different settings (different content areas, different classroom types, etc.)?

Different settings impact attitude and effort

As long as productive – still success

Confidence to make progress

Blended = prepare for college – self-accountability

8. Is there anything else that you would like to share about academic success?

BK Notes – Annie

Personal views/recollections from Annie in class:

[Annie was a student from the 2019-2020 school year and was online after school closed. Because of this, I was not fully able to see Annie as a student in class along with some difficulty fully remembering how she was in class.]

- Seemed to be somewhat abrasive, though not fully rude
- Was hard working at times – other times she seemed to not put forth as much effort or seem to 'care' about the class
- Willing to ask questions and get help when needed
- Grade seemed to be a focus even though math is more of a struggle for her

Initial 'Success' Survey responses:

1. What grade are you in?

   Senior
2. What is your current GPA?

   Between 3.0 and 4.0
3. What are ways that you 'define' success?

   'Good grades'/GPA

   Understanding the material

   Good attendance
4. Who influences your 'definition' of success?

   Parents/Family

   Teachers

Interview #11

1. How would you describe yourself as a student and how would you describe yourself as a math student?

In general:

- Motivated
- Hard working
- Generally good grades
- Extra effort – come in to get help, ask questions, study

In math:

- Similar but more questions
- Struggle – but enjoy figuring it out

2. How much time do you spend outside of class on homework, studying, etc.? What impacts this amount of time?

About 1-2 hours – "remember quickly"

'Life' impacts amount of time (family, work)

3. How do you 'define' success in the classroom (academic success)?

- Work hard
- Good grades (GPA)
- Challenge self
- Make progress
- Proud parents (grades)

4. Can you give an example of a time that you 'succeeded' in any classroom setting?

In math – first Pre-Calc test (99%)

In non-math – Spanish project (100%)

5. Can you give an example in which you didn't 'succeed' in the classroom?

In math – cheated in College Algebra and got caught

In non-math – Sociology – easy class, but slack on paying attention and effort

6. Who or what influences your 'definition' of success, especially in the mathematics classroom?

Dad – works hard (bettered himself by challenging himself)

Teachers – relationship with students (bonding)

7. How does your 'definition' of success in the classroom change in different settings (different content areas, different classroom types, etc.)?

School vs. out of school

In school there are standards to meet

Out of school it is more of a choice

Grades – view is different but the same

Happy with self if trying hard – doing best I can

You get what you put into it

8. Is there anything else that you would like to share about academic success?

Personally seeing results in self – excitement of self-ability/growth

Self-awareness

Failing = no energy to try hard

BK Notes – George

George was unable to fully participate in the study, but filled out an Initial ‘Success’ Survey with results below.

Initial ‘Success’ Survey responses:

1. What grade are you in?

   Senior

2. What is your current GPA?

   Between 3.0 and 4.0

3. What are ways that you ‘define’ success?

   ‘Good grades’/GPA

   Understanding the material

4. Who influences your ‘definition’ of success?

   Myself

   Peers

   Teachers

BK Notes – Small Group Discussion #1 (Becky, Mike, Sally, Joe, Victoria)

1. Based on the aspects that you use to 'measure' success in the classroom, which of them is/are the most important?

- Understanding
- Effort
- Happy/content
- Grades

2. How do peers, parents, teachers, etc. impact your view of success?

Parents – expectations

Compared to siblings

Peers – competition/comparing

Teachers – effort of teacher – how teacher views student

Own self is main focus on success

3. How does the classroom environment impact your view of success and/or the ability to succeed?

4. In a mathematics class, when/how do you know that you understand the content being taught?

- Confidence
- Be able to do it without assistance – do it efficiently
- Being able to help others
- Getting good grades on tests – consistency in grades

5. What are things that prevent you from achieving success in the classroom, specifically in the mathematics classroom?

- Schedule – life/being busy
- Distractions
- Class environment
- Teacher
    - Does the teacher care?
    - Does the teacher think I am not putting in effort?

BK Notes – Small Group Discussion #2 (John, MJ, Raven, Nicole)

The recording of this small group discussion did not save – therefore there is no transcript of this small group discussion, only these field notes that were written down during the discussion.

1. Based on the aspects that you use to 'measure' success in the classroom, which of them is/are the most important?

- Understanding
- Effort
- Happy/content
- Grades

Effort and happiness were both identified by two as being **'least important'**

2. How do peers, parents, teachers, etc. impact your view of success?

Parents – expectations

Compared to siblings

3. How does the classroom environment impact your view of success and/or the ability to succeed?

- Lecture vs. interacting
    - Actually teaching vs. teacher that doesn't care
- Teacher accountable for students' success
- Fun environment

4. In a mathematics class, when/how do you know that you understand the content being taught?

- Ability to do it without help
- Application – being able to apply knowledge
- Ability to remember/understand

5. What are things that prevent you from achieving success in the classroom, specifically in the mathematics classroom?

- Schedule of life – job/extracurriculars
    - Lack of time needed to understand
    - Lack of time devoted to learning
- Is it beneficial for what I want to do?
- Procrastination

Hypothetical question of how things would be different without grades.

- Can I remember what I learned?
    - Can I apply what I learned
- Did I learn?
    - Do I care?
- No grade = no metric for success
    - No grade = no feedback?
    - Grades = motivation

APPENDIX G - Interview Transcripts

Interview #1 (Becky)

BK: … I am interested in learning more about how academic success is defined and measured, especially by students themselves. As an educator, I understand that success is viewed differently by various groups of people like students, teachers, administrators, etc. and I'm wanting to understand more from the perspectives of students in the mathematics classrooms… So, the first question: how would you describe yourself as a student?

Becky: … I am very dedicated to school, probably a little too much. I stay up really late during homework, and will get up early to do homework and very dedicated.

BK: … If I were to ask you how you would describe yourself as a math student, does that change at all?

Becky: I don't think it changes… a lot of time with math, it's more (a focus to) get it done rather than understand it sometimes… I'd spend hours on my math (homework)… I would definitely use the tools; I would use the example problem all the time… Math is like one of the ones like you can't fake it through math… It's like if you don't know how to do it, then you're screwed for the test. And so, I would really try to like understand it…

BK: … How much time would you say you spend outside of class on homework, studying, et cetera?

Becky: … I feel like if you generalize high school… on average, maybe like four hours (a night)…. Depending on if I'm in an AP class, that would be more… But I've also spent like ten hours on homework…

BK: … You said AP definitely impacts and can kind of increase that. Would you say the same is true for math or…?

Becky: I would say usually math would increase my homework.

BK: Other than specifically what the classes are, are there any other things that impact the amount of time that you are spending?

Becky: … My phone… I can get pretty distracted by that… Like if I go home – you know you're supposed to go home and start on your homework right away and that was just so hard sometimes. So, I would get on my phone… Getting distracted with that and just like not willing to do it… I work sometimes after school…

BK: … (Can you) give me an example of… not willing to do it...?

Becky: … It's just a not wanting to do it. Especially if it's hard, I will put it off… If I know I only have a little bit of homework than it is so much easier for met to get started so I can be done with it because then I know I have the rest of the night. But if I already know I'm going to be spending like two hours on it… do it later, which I know is not a good mindset…

BK: … How would you say that you define success in the classroom?

Becky: Understanding it is obviously a big part… Understanding the material – specifically in math, I will remember it until the test… After the test, it's gone… And good scores on tests… whatever the best grade is. As long as I get that, I'm fine…

BK: … Where do you think that desire for a one (an A) comes from?

Becky: … I check my GPA religiously. Every time the semester is over, I check it… The whole idea of the ACT starting like eighth grade stressed me out so much… I knew that I wasn't going to get a good score on the ACT… So, I knew that my GPA, like that's what's going to get me to college… That was like my whole mindset… I'll take all these really hard classes and stress myself out a bunch and I will be really great… When realizing now I could have just taken easy classes and gotten a 4.0 so easily…

BK: … Can you give an example of a time that you succeeded in in any classroom setting?

Becky: … I feel like I've succeeded in every class I've taken except for I got twos in chemistry and I got a two in AP government and politics… So I would say every class except for those… Like your class, I would say success. Now, maybe next year when I'm taking my first college math class… I (might) wish I would have tried to learn the material better, but I got a one so it's fine.

BK: … Do you think that our current block schedule helps or in some ways might even hinder success?

Becky: … I feel like teachers are pretty good about it… Usually like we do two sections… and I remember going into it thinking that's going to be so much… It is a lot of homework, (but) most of the time I feel like there's time to work on it in class… I guess I haven't known anything different, really… I don't think, at least for me, I don't think it has been a bad effect on my success…

BK: … Having, say, a semester or two or however long, without (having) a class like math… a whole calendar year without math. Do you think that is going to impact success and your ability to attain success…?

Becky: … I don't remember anything already. For somebody like me who forgets it the day after the test, like once the semester is over… (I'm) glad I don't have to think about any of that for… (But) it definitely does not help…

BK: … Who or what influences your definition of success, especially in the mathematics classroom? ...

(Slight interruption by another teacher.)

Becky: … I would say my friends… but they are so (smart)... I just compare myself to them… I hate having to ask for help, especially if I don't like the teacher… I asked my friend for help all the time and I hate asking for help because that just makes me feel so stupid… I'm always the last one taking tests… I compare myself to my friends and to my peers and… it makes me want to go faster… So, I would say as far as peers like, it's more self-conscious about being the last one… But as far as my friends go… comparing that's more ability…

BK: … It kind of depends on who the peer is and your relationship with them.

Becky: Yeah, definitely the relationship.

BK: … We did away with class rank… You like that?...

Becky: … (For) our school specifically, like you could have 10 people who are number one in your class if they've taken the same AP classes and the same like regular classes and got the same grades… But I did kind of like it… I was kind of like, wow, I'm pretty smart, like twentieth out of six hundred… I did kind of like it, but I think that now that it's gone, it's not affecting me either way, I don't think… I'm sure (if) we kept it, I would also check (my GPA) to see exactly where I am and would probably use it to compare myself to people. So, probably it was negative in the long run… it's probably good that we got rid of it actually.

BK: … If (a friend or classmate) were to say that the only reason, or part of the reason, that you're ranked higher than them was because of the easy classes… What are your thoughts on that?... Where is the balance (with) challenging myself?... What are things that kind of caused you to choose (AP GOPO) vs. (the 'regular')…?

Becky: I think I felt a little bit obligated. I've taken… other AP classes… (and) I feel like AP GOPO is a very popular class… I think there was just an obligation of you've taken harder classes, so you need to take this one because it's probably not as hard as the other ones and… Boosting the GPA… I intended to get a super one…

BK: … It was kind of wanting to challenge yourself, but at the same time wanting to not overburden yourself... You use the word struggle with math... Where in math do you view your struggle?

Becky: … I think probably the majority is actually comprehending the content… actually learning and figuring out what is supposed to be happening with whatever problem, with whatever assignment… That is probably the main struggle for me… Content, that's probably… the biggest thing. And then I think that just plays into my time… If I really know an assignment, sometimes I'll finish really fast, but usually not… I go back and I double check my answers and I rewrite it and make sure that it's right and I'll go through every bubble I filled and make sure it matches the work that I did on the test…

BK: … Do you feel that… (math) is taught for the purpose of understanding or taught for the purpose of the process?

Becky: The process… not all the time for understanding… Some teachers (are) really good about it… really encouraging questions and (coming in to get help)… A lot of times teachers have their lesson plans that they need to get through and get them done. And then we have homework that we just want to get done, like lesson plans to teachers is homework to students… I don't think all the time it's for like retention or actually remembering it…

BK: … You (talked about) going back and checking (answers) and that your goal is the highest grade possible – would you classify yourself as a perfectionist?

Becky: I think so… When I'm doing homework, when I'm just tired of it, I'll just go through and kind of be done with answers, but then I'll come back to it the next morning and be like, OK, I actually need to. I think I'm embarrassed to turn in an assignment that I know is passing, but is only eighty-five or something like that… Especially when I could see what the score was before I turned it in, I would never turn into something below ninety…

BK: … Hypothetical question… if grades went away, what would that do to your view on success?... Would that impact how you work for success?

Becky: I think, for me specifically, it would definitely (impact)… It would definitely release a lot of stress and anxiety… grades (are) my biggest anxiety and so that would definitely lift it… And I think it would also. Turn my drive for success to be more understanding rather than getting the grade…

BK: … Do you think that then it would become selective and caring more about some classes than others…?... Do you think that that would impact your desire to understand or what level of understanding you would be striving for?

Becky: … I would have to still focus on physics because I can't be a writer if I don't get into college like that is that's what my brain is thinking… I feel like I would put in lots of work and I feel like I would be the same like effort-wise at least, but maybe I would try harder in writing or in my English classes… So, I guess no, I'm not going to care about it as much if I know I'm going to be in something else.

BK: … Is there is there anything else that you would like to add in terms of your views of academic success? … Thank you for your time.

Interview #2 (John)

BK: … I am interested in learning more about how academic success is defined and measured, especially by students themselves. As an educator, I understand that success is viewed differently by various groups of people like students, teachers, administrators, et cetera. And I am wanting to understand more from the perspectives of students in the mathematics classrooms. So, my first question for you is, how would you describe yourself as a student?

John: Um, I'm an okay student. I mainly get ones and twos, sometimes I'll get threes. I'm not like the best at math. For like history classes and stuff like that.

BK: … Is there any reason… you would say you're more of a history person than a math person?

John: … I find it a lot more interesting… the battles and stuff like that… Sometimes numbers just don't make sense to me, but like I can understand, like what it says in that (history) textbook… In math, that's where I kind of get my lower grades. I don't know why, but that's just what happens.

BK: … In other words, it's not that you act differently in math, it's just the result isn't the same.

John: Yeah. It's not the same.

BK: … How much time would you say you spend outside of class on homework and studying?

John: … Right now, not very much because I have two classes and we don't really do that much… When I was in… math class, I did my homework at night and if I didn't get done, I took time to do it in the morning… it was still tough with football because we'd be here late… probably like an hour-ish if I actually have stuff to do. If not, I'm not really doing anything.

BK: … So, you would describe yourself more as… 'my work outside of class is homework and not necessarily as much of extra study.'

John: Yeah, I'm just going to like get done with like what's assigned and stuff.

BK: … You gave an example of football impacting the amount of time… are there any other things that would impact the amount of time that you spend?

John: Oh, well I have a job… sometimes I get home late at night. I don't really have… the drive to do anything, any homework at all…

BK: … Would you say that you're say drive to do stuff and to work on things is different… in a math class versus other classes?

John: … Not really… In math… I try hard, but sometimes I just don't understand it. I don't know, I don't think it's different. It's the same I just don't get as much…

BK: … It's not a question of effort, it's just math is so different that sometimes the understanding is maybe not there to the same level as other classes?

John: Yeah.

BK: … How would you personally define success in the classroom?

John: … Probably in math is just passing… I just want to pass and be able to get my credits, because I know it's like going to be hard for me. I'm going to try my best, but… I just want to get a passing grade… And like in different classes… if it was a class I know I'm like good at, like I want to get like a one or two…

BK: … for both settings, success is based on the grade?

John: Yeah.

BK: But where the bar is set…

John: Is different – is based on my strengths.

BK: … Can you give an example of a time that you succeeded in any classroom setting… maybe an example of in a math class and not in a math class…?

John: … Last year in math… I got like a two. I felt really good about that because I was trying really hard to keep it there, like I did good on the finals and stuff and all the tests… I felt successful doing that. But then we went to quarantine… I got a three after that because it was hard to do online.

BK: … and then outside of outside of the world of math, what's an example that you look back and you say, "I succeeded"…?

John: … If I give like a good presentation… a pretty good grade on a presentation. Like not stuttering… that excites me 'cuz that's also something that I've struggled with in the past, too… When I get a good grade on it, it makes me feel successful.

BK: … Can you give an example, on the other hand, of times that you didn't succeed?

John: … Sophomore year (math), I got like a four I was really mad about that. I don't know I probably like failed the final and stuff.

BK: … Would you say that you succeeded in our class, in college algebra?

John: Yeah, I think I did. I tried my best. I felt like I got pretty good grades.

BK: So. Your definition of success… is based on grades? Where do you think that comes from?

John: … Wanting to be able to graduate and get into a pretty good college and scholarships and setting out for my future.

BK: So, your defining success (with grades) is to some extent motivated by the external factor of that's what colleges are going to look at.

John: … For me, yeah.

BK: Would you say that your parents play into that at all?

John: Yeah, they definitely like push me to try to get me to do my best… and then they want me to get pretty good grades, so I always try very hard for them… I don't want them to like get mad at me for failing classes and stuff. I think like my dad, like being like a teacher – he was a teacher, now he's a counselor – definitely puts into that too because I feel like he knows where I should be and stuff in school.

BK: … Would you say that there's any peer influence… in your view of grades or… your view of success in the classroom?

John: No, just myself, like what I think.

BK: … Hypothetical question. Everybody gets a four in the class. Does that change how you feel (about) success… regardless of whether it's math or not?

John: … A little bit… hard class… other people are getting the same grade as me… I'm like the rest of the people. We're all doing the same thing… I don't really care what other students think about me. If I get a four… I tried my hardest…

BK: … Knowing the level of difficulty of a class kind of might impact where… you set the bar for success… Are there any other things… that would impact where that bar is set for you to have that goal?

John: … No, not really… Maybe… when I was playing football, like just trying to stay eligible, just so you could be able to play like not failing classes completely… If I see my grades slipping a little bit, I'm going to try a little harder to make sure I can maintain the same grade (to) stay eligible to play… And then like if I like get bad grades and my parents aren't going to like, let me go to work and stuff…

BK: … What do you think about say other tests like the ACT?

John: I don't really like the ACT… because it's like timed... This year was nice because you didn't have to submit your ACT scores… For my ACT this year, I was like really just trying to focus on being like a 20 or above on the math portion so I can meet that graduation requirement… I'm not good at it the time part… And sometimes… math… was like a year ago…

BK: … You just brought up the fact that, like with math, sometimes you might have not been in math for a year… Do you think that our block schedule helps or hurts… how you are able to succeed in the classroom?

John: … I feel like I learned a lot more like when I had a classroom the beginning of a year to the end of the year… But I think block scheduling is fine. We do have longer classes, so we do learn a lot, but it's just like that you can be like four semesters before you have another, like, math class. That's a little tough… You know, the little things like you just forget…

BK: … Would you describe yourself as a… math person?

John: No. I mean, I like… business math… accounting stuff. I like that type of math. I don't like like PEMDAS and that…

BK: So, with regards to math, you prefer the I can obviously see how this is usable versus more abstract pie in the sky, when am I going to ever use this?

John: Yeah… Like I've been taking like accounting and… I like those a lot compared to the normal math. To me, it's pretty straightforward…

BK: Do you think… part of your views are based on the fact that teaching is sometimes focused on… the test… versus understanding it?

John: Yeah… In accounting right now… you can take the test when you want, when you're ready. I like that a lot more because I can actually figure out what I'm not good at within the unit, and like focus… a little bit more…

BK: … Would you say that having a good understanding is related to success?

John: Yeah, probably.

BK: … You gave the example of ones and twos… if I'm passing in math… that's good… Two hypothetical questions. You pass in math, but you have no understanding of what in the world just happened. Is that success?

John: No, not really, because what was the point of being in the class if you're not going to learn anything? Even if I get like a three or something, I'm still learning, I still understand something…

BK: … let's kind of go on the on the history side… For the hypothetical, we're going to say it's AP US history… You're in that class and you understand everything… and for some reason, you end the class with the three…

John: … I would see that (as) successful because, like, I learn stuff, but I feel like I don't know, like my parents, like, they going to expect me to get like ones and twos in those classes, like they might not see that as successful.

BK: … To what extent would you say that your parents views of success overrides your own?

John: … in classes like if they know… I do well in those classes… they're going to like expect me, like get a one or two… I'm going to try… for that reason...

BK: … Another completely hypothetical… so if we were to do away with grades and go completely on some form of a pass/fail measurement… how would that impact your definition of success and your view of success?

John: … Without the letter grade… (did) I pass and did I actually understand…?... If I'm not trying for a one or two I feel like I should be able to know more of what's happening in class and understand it better.

BK: … Your measurement of success would be I come out of it somehow, at least a step or two further than where I was?

John: Yeah.

BK: … Is there anything else that you would like to share or add about your views of academic success and your definition of academic success?

John: … I feel that for some people, like they take all the hard AP classes and stuff… but they're like not happy, like in real life… I don't want to do those classes because I know I won't be happy if I know that's like not successful in my opinion. I won't do good in those classes… Happiness should still play in part of the success. I don't want to be like stressed out all the time throughout the class, I want to feel like… happy… feel good.

BK: … Thank you for your time.

Interview #3 (Joe)

BK: … I am interested in learning more about how academic success is defined and measured, especially by students themselves as an educator, I understand that success is viewed differently by various groups of people like students, teachers and administrators and I am wanting to understand more from the perspectives of students, specifically in the mathematics classrooms. So, my first question for you is, how would you describe yourself as a student?

Joe: Uh. I would say I'm a pretty hardworking student… I like certain classes, like when I'm there… I do enjoy being at school. There're a few classes I don't like though. I'd say I'm like… I think it's called like auditory learner, like I'm fine with just listening to lectures or like watching people work and then doing it myself…

BK: … If I were to be a little bit more specific and say describe yourself as a math student, does that change your definition at all or does that change your views?

Joe: I could probably work harder in math… like doing stuff outside the classroom…

BK: … How much time would you say you spend outside of class on homework, studying, etc?

Joe: … Currently nothing, because I just only have two classes a day and one of them, just the only homework we have is like reading… We get it done in class all the time, but usually I probably spend like 30 minutes to 45 minutes on homework and stuff outside of school… like every other day – when I need it.

BK: So, as needed… half hour to hour… and that was even going back to like when he had a full schedule… You would say you do a lot of your work in school so you don't have to do it at home.

Joe: Yeah.

BK: … What are factors that impact the amount of time that you would spend on homework… you said, it depends on the day… What are some (other) things that would impact?

Joe: My current grade in the class. When an assignment is due… If I have like three days to work on it, I probably won't work on it the first night… the class, of course, because like certain classes just aren't as demanding…

BK: … Would you ever find yourself not spending time on homework because you didn't have time because of outside constraints… or (would you) still find the time to do what you needed?

Joe: Yeah, I still had time to get done what I needed to… After football you have the rest of the night, so it wasn't bad… Wrestling is a little tougher… when we're out of town and stuff that you're just missing…

BK: … How do you define success in the classroom?

Joe: I would say it would be actually knowing the material and by taking that knowledge with you… Not just knowing it for the one week, testing and then forgetting about it, but fully like understanding and remembering the material.

BK: … Would you say that that definition might change in different classrooms and classroom settings?

Joe: … A P.E. class it's just a grade…

BK: … for some classes it might look at the grade, but for most classes you're looking at what did I actually learn?

Joe: Yeah, because if you know… the material then the grade usually shows that.

BK: … a hypothetical… say you're in chemistry, and you understand everything, like even to this day… but you got a four in the class, is that success?... If you understood it, but the grade didn't reflect…?

Joe: Yeah, probably. I think it should go hand in hand, like knowing it and getting a good grade.

BK: … Can you give an example of a time that you succeeded in any classroom setting?

Joe: … I got a two in my… English 11 or something, which was a pretty tough class… I actually, like, sat down and read for the first time in a long time in that class and knew about the books and like what we were doing and helped my writing and stuff and I ended up with a good grade…

BK: … Can you give an example that you didn't succeed in the classroom?

Joe: … physical science physics… I could have easily gotten a much better grade, but I didn't do a lot of the homework and stuff, and I ended up with like a three or four in that class. And that was like pretty much a hundred percent on me…

BK: … Would you say that effort is part of your definition or effort is just something that helps achieve success for helps achieve success?

Joe: Helps achieve success.

BK: … Can you give an example of success or not success specifically, say, in a math class or in a math setting?

Joe: … I would say that the class I had with you is successful compared to the one I had before that because it was a class I dropped… I re-took it with you and I went from failing to I think I got three or two in your class… I'd say unsuccessful was dropping out of College Algebra and then successful was when I picked it back up and then actually put in some work and got a better grade.

BK: … (When) you dropped, what led you to dropping?...

Joe: Yeah, I had like a tough schedule that semester, but I wasn't understanding the math or like the way she was teaching… I just wasn't picking up on it. And then we were like three or four lessons in and I was too far behind, like, to remember the concepts we needed. And yeah, I just felt like I got too far behind. And then we decided to do it a different time.

BK: … Are there any external factors to how you view success?… Who influences your definition of success?...

Joe: Oh, yeah, my dad, he puts a lot of emphasis on grades and I got to keep them up… I do usually keep them up for the most part… He influences my grades and also like college, I got I was at like a two-nine and I got up to three-one so I could just look better for colleges and all that…

BK: … (Do) peers influence your definition and views of success at all…?

Joe: … My peers don't really influence success in the classroom for me. I kind of like do my own thing… get my grades and stuff.

BK: … Would you say that… teachers… influence your definition of success?

Joe: For sure… different teaching styles or like some teachers are super dull and you just don't want to be there, and so you might not be in as much effort into the class and then… I think teachers definitely influence success, too, or at least help it or don't help it.

BK: … You listed knowing as the main part of success, and then you said if I'm doing it right, my grade will reflect the knowing…. Do you think that teachers and schools… put too much emphasis on the grade?

Joe: Oh, I don't know. Uh. I don't think like teachers and in school, uh. I don't know, because some colleges I mean, like you can't afford it unless you have certain grades, it's like stuff like that, so. To an extent, yeah, but I mean, like I don't ever feel pressured, like by teachers to get a certain grade or anything like that.

BK: … Would you say that your definition of success changes in different classroom settings?

Joe: …Success in a gym class is different than success in like a math class or something… In gym… I'm just trying to get like a one in the class and then I pretty much have a good time, I guess, versus math, where I actually am sitting down and learning and then have to know it and then getting good grades and stuff… I'd say it can change from class to class, depending on what it is.

BK: … Say you have the option to take an in class science or an online science, same class just in-person or online. Knowing who you are as a learner and your style, would you pick in-class or would you pick online?

Joe: In-class.

BK: … If there was only an online option, would you view success differently?

Joe: … Yeah… when we were online, my goal was to get to class, get a good grade and then sign off for the day… success changes in the classroom when we were all online.

BK: So, being in the different setting did affect at least your effort?

Joe: For sure.

BK: … How do you know when you know?... Can you give me an example or kind of a little bit more detail of in the math class, how do you know that you know or when you know?

Joe: … When I can just bang out problems and then… even finish one of the more challenging problems without mistakes or asking a bunch of questions and stuff. Once I can do the work on my own and just go through it no problem…

BK: … What are your thoughts and views on the ACT and how that may or may not be related to success?

Joe: … I don't really like it, I because I think it I don't think you really like learning stuff like that. You just take practice ACTs just to get a good grade on that. I don't know because. Like for my ACT, like in the science section, I haven't taken a science class for like three semesters before that and so I wasn't as good in that…

BK: Do you think it serves a purpose?...

Joe: I'm not sure, because, like, I've seen people who are really smart and stuff but just can't take the act like they'll do score bad on it, like they'll hold a 4.0 and stuff like that. So, I mean, I don't know, because it yeah, there could be a purpose to gauge where people are at and be able to see how schools are doing. I guess. Or something like that.

BK: … Is there anything else that you would like to add or share about your views and definition of academic success?

Joe: …No, I think, like I said earlier, the effort and knowing the material… Putting in an effort to help you know the material which then will get you a good grade, but overall, I think knowing the material is it still the main success thing…

BK: … Well, thank you for your time…

Interview #4 (Victoria)

BK: … I am interested in learning more about how academic success is defined and measured, especially by students themselves. As an educator, I understand that success is viewed differently by various groups of people like students, teachers, administrators, et cetera. And I am wanting to understand more from the perspectives of students in the mathematics classrooms. So, my first question for you is, how would you describe yourself as a student?

Victoria: Um, I would probably say that I work hard – study as much as I can. I try and focus as much as I can in the classroom… I get done all of my work pretty much, so I would probably say studious.

BK: … In a mathematics classroom specifically, would you say that changes your description of yourself as a student…?

Victoria: I would probably say it's less of studying… learning the strategies and practicing other than studying the material. But I don't think it would change what I would say about myself as a student.

BK: … Math is just one of those things that it's more of a practice than… studying… How much time would you say that you spend outside of class on homework, on studying, etc.?... We'll say for any class in general…

Victoria: Um, probably around 30 minutes to an hour. I try and get most of my work done outside of the classroom just because it's easier for me to focus that way. I seem to be more productive when I'm doing things on my own, where there's less distractions other than in the classroom where there's students around you or noises…

BK: … What are various things that kind of impact the amount of time that you spend on homework or in some cases that might limit the amount of time that you're able to spend on homework?

Victoria: … For me extracurriculars like show choir and theater. I also work three days a week, so all of those things limit my time plus time with my friends and family.

BK: … What might impact you spending more time or needing to spend more time?

Victoria: … It definitely depends on the material for me because most of the time when it's easy, I don't have to spend as much time. When it's something that I don't understand, I usually have to figure it out on my own and more of the time to just work it out… Most of the time when I'm struggling, I just either look it up or talk to someone else.

BK: … How would you define success in the classroom?

Victoria: … How much you understand the material because when you're understanding things, it makes it so much easier and you don't have to struggle on it just makes you happy… I think that when you're happy with your grades, it doesn't necessarily have to be an A for everyone, but when you understand the material, it brings your grades up…

[Brief interruption by another teacher asking a question.]

BK: … A lot of your focus of your answer was on understanding the material, and then you also discussed being happy with the grade, whatever that grade may be.

Victoria: Yes.

BK: … We'll go with in general, and then we'll go in a math setting specifically, but can you give an example of a time that you succeeded in the classroom?

Victoria: For me personally… contemporary literature right now. I love reading, so when I finished that essay and I was happy with it… it just felt good that I had understood what I was reading and knew what I wanted to talk about in my essay that made it so much easier.

BK: … All right, and then in a say, a math classroom specifically, can you think of a time that you would say that was success?

Victoria: Probably when I didn't understand a certain problem, there have been quite a few times where that's happened. But once I finally have seen it done multiple times and I understand how to solve a problem and I'm able to do it by myself multiple times… When I am able to solve something on my own and do something myself.

BK: … Can you give an example or think of a time in which you didn't succeed?

Victoria: … I studied for a while for my government class. I studied for probably a good 30 minutes, maybe an hour, and I did not do as good on the test as I thought I would.

BK: … Do you think that you did bad on the test because you didn't understand the material or do you feel like you understood, but the test result just didn't line up with… what you were viewing as your level of understanding?

Victoria: I think it would probably be a little bit of both because there's always like you can study to a certain extent. Vocab you can study it and you'll get it right, but there's always a gray area where there's questions that you don't know are going to be on there that necessarily aren't on like a study guide… I think it's a little bit of both.

BK: And can you think of an example of not succeeding in a math setting?

Victoria: … Probably like the opposite of what I said for succeeding is like maybe practicing it and just not understanding or maybe you think you do understand and then when you go to take it on a test, you just get it completely wrong.

BK: … I know we kind of had this question a little bit on the survey, but who or what would you say influences or kind of helps shape your definition of success, especially in the mathematics classroom?

Victoria: I would mostly say teachers and sometimes students because you'll see other people succeeding and like in the sense of understanding a problem and you just don't get it no matter how many times you've tried… For teachers… a lot of it is based on tests and how good you do on them. And if you don't do good on this test, then maybe we can retake or go over what you didn't understand so you can understand it… because you have to use it in the future…

BK: … A little bit of a clarifying question. Would you say that they impact your definition or they impact your ability to succeed?...

Victoria: … Seeing others around you (succeeding), you just want to succeed. I guess they can impact it in that way.

BK: … Your definition of success, you said understanding the material, happy with the grade, and had a few other things that were listed there… Say… you get a two, but you're not happy with your grade for whatever reason… Is that success?

Victoria: Um, I guess you would have to look at it in the sense of did I push myself? Did I work as hard as I could? And if you did then I would say it is a success if you worked your hardest and that's the best you can do… I think part of it is how hard you work… If you're not happy with your work ethic, then it's not success.

BK: Does your definition of success… change in different settings, in different classroom and content areas?...

Victoria: I think it mostly stays the same for every class…

BK: … We'll ask a hypothetical… You go to college next year and you're taking an online English class. Now, again, it might be an in-class option and an online option… I guess the first question would be knowing yourself as a learner, would you… pick the online option or the class option in class?

Victoria: In-class.

BK: So, say in this hypothetical, that the in-class isn't an option… so you have to take it online. Does that change your view of success?

Victoria: Probably not that much. I mean… I think it's easier to learn in person just because it's more convenient to ask questions if we need to and like on a computer… it's harder to get hold of who you want to talk to. But I would define success probably the same way; just understanding what you know and trying your hardest…

BK: … Is there anything else that you would like to add or like to kind of share in terms of your thoughts and views of academic success?

Victoria: … Working as hard as you can is definitely part of defining success because you can't really succeed if you're not trying your best. And if you do then it just doesn't feel as satisfying or as fulfilling as you did if you worked your butt off to get there.

BK: … Thank you for your time.

Interview #5 (Mike)

BK: … I am interested in learning more about how academic success is defined and measured, especially by students themselves. As an educator, I understand that success is viewed differently by various groups of people like students, teachers, administrators, etc. and I am wanting to understand more from the perspectives of students in the mathematics classroom… My first question for you is, how would you describe yourself as a student?

Mike: I would describe myself as… very hard working, responsible, trustworthy. I also like to get to know the teacher so I can have a little personal relationship with them. It helps me be able to learn the content better and the teacher always has that little interaction with me that makes me feel a little bit like I'm at home…

BK: … Would you describe yourself any differently if I were to be more specific to the math classroom, like as a math student?

Mike: Well, math for me, it comes really easy to me… I have certain little study habits for each different class I take and how the teacher presents it. So, like some lessons might take a little longer because possibly of how the teacher teaches and how I specifically learn…

BK: … How much time do you spend outside of class on homework, on studying, etc.? …

Mike: For me personally, I spend about one to two hours a day. I usually just go over what we learned, go over the notes, et cetera… For math class, maybe it's a little more so I can get the concept of like the test…

BK: … Are there other things that kind of impact the amount of time that you do use or in some cases might even limit the amount of time that you have to spend…?

Mike: Maybe when I'm struggling or if there is a really, really long lesson and I didn't have much time to ask the teacher a question after class… If I'm working too much at home, I set myself a limit… I give myself a little 20-minute break in between so I can come back (and finish homework).

BK: … How often would you say you find yourself having to step back after too long?

Mike: … Twice or three times a month at max…

BK: … How would you define academic success?

Mike: … Self-satisfaction… trying to do your best at what you're trying to become the best at… With me, it's not like a grade – that's not usually important… I aim for good grades, but like you want to understand the concept of the course… So, if I'm driven and I achieve that, that's success for me.

BK: … Can you give an example… of a time that you succeeded in the classroom?

Mike: … I had this big final coming up and I was borderline I was at a two, but if I had like one little mistake it would drop me down to three. So, I put in three nights of work… got the classroom and I didn't feel pressured at all… It really made me happy because I studied my butt off and I was able to keep my grade…

BK: … Would you say that you understood the material?

Mike: Yeah, I would say I understood the material… When I get the material, I get it down to my notes, study it a little bit, and I try to kind of relate to the real world… Yeah, I just studied my butt off and did very well.

BK: … Can you think of an example of success in a different classroom setting in a non-math classroom?

Mike: … Chemistry class, science is one of my toughest subjects. I struggle to relate that to the outside world… I had a final coming up… I was actually at a(n)… eighty four… and I wanted to get it up to a two… So, (my dad) helped me study a little bit… I studied I think it was for like four or five days… but I felt I did my best in that class throughout the whole semester… I ended up with the two…

BK: … Can you think of an example when you didn't succeed?

Mike: … Freshman year, I didn't have a lot of good study habits… (English) was a pretty easy class and when the test came up, I didn't prepare at all… I don't do so hot on the test and it drops me to two and… the semester's over… I wasn't prepared – I wasn't studying – I wasn't taking it seriously.

BK: … Are there any examples that you can think of in math that you would consider as (not succeeding)?

Mike: … Geometry is one of the toughest classes for me… I struggled in that class just simply because it's geometry… I guess I could say I wasn't (successful)…

BK: … Who or what would you say influences your definition of success?

Mike: I believe myself… I set goals for myself at the start of every school year… (My parents) motivate me… but it's mostly me…

BK: Here in your survey, you indicated teachers as well. To what extent or what do you mean/think of when you say teachers influence your definition of success?

Mike: … I get to know the teacher… have a conversation and get to know (them) a little bit… They get to know me as a person and they feel I have the potential…

BK: … How would you say your definition of success changes in different settings?...

Mike: … I try to set a higher goal of things I'm good at… because I know that I'm pretty good at those… (In) a science (or) history, I'll set my goals maybe a little bit lower than what I set up my math and English…

BK: … What are your views on like grades?... (If) there wasn't a grade given, what are your thoughts on how you would be able to set a goal for yourself and measure that?...

Mike: (It would change) a little if we didn't have the grade system, but I still… (I would) still come to class prepared, going to do my best, still setting those goals… I would say try to understand the concept of it even if there was no grade system, because I'm just setting a goal for yourself. Challenging yourself to do well is one of the biggest keys to success.

BK: … Do you see yourself changing where the bar is that going from high school to college not knowing what that transition looks like?

Mike: I mean, possibly. I know that from high school to college is a really, really big step, test-wise, learning-wise… but for me, I'd still try to keep those same goals because like I said, I like to challenge myself. I like to try to do the best I possibly can. So, they'd maybe change a little bit because I'd have to adjust about college lifestyle, how to study the big finals… Maybe a little bit adjustment, but I (would) try to for the most overall, I try to keep it mostly the same as much.

BK: … Is there anything else that you would like to add about academic success and your views and definitions of it?

Mike: … Work hard… You've just got to keep working hard all the time (and) the results will show.

BK: … Thank you for your time.

Interview #6 (Nicole)

BK: … I am interested in learning more about how academic success is defined and measured, especially by students themselves. As an educator, I understand that success is viewed differently by various groups of people like students, teachers, administrators, etc. and I am wanting to understand more from the perspective of students themselves in the mathematics classrooms. So, my first question to you is, how would you describe yourself as a student?

Nicole: I would say I am hardworking, but I don't have motivation depending on like the subject or like the length of the project. For math I definitely need more of a push to get there… I definitely would like to achieve my goals, and if I don't then I'm disappointed by myself.

BK: … When you say like you need more of a push, like where does that come from or like what external factors would motivate you more?

Nicole: My parents motivate me a lot. Or if my grades drop or I get a bad score on something. Them being stern with me or getting mad at me that usually makes me want to get it up to what it should be because I don't like disappointing them either… so my parents and just my overall grade, I guess, like if it's not up to where I usually get good grades, if it's a random low grade…

BK: … How much time would you say you spend outside of class on homework, studying, etc.?

Nicole: Definitely depends on the class. Math I spent a long time outside of class studying and doing my homework… I usually spend maybe 30 minutes in total on other classes, but math usually took me a good portion of my night depending on if I understood the unit.

BK: … Are there ever external factors that caused you to spend less time than you would want or need?

Nicole: … I didn't dance this year, but last year when I would dance that took up like almost all of my nights, so I wouldn't have as much time to study and stuff … So, I always found myself doing it the next day or in the morning.

BK: And when you were doing dance and having less time, would you say that that impacted how well you did in your classes?

Nicole: I wouldn't say so because I still always got it done, just like at a different time…

BK: … Our third question here, which is kind of the main pinnacle of everything, how do you define success in the classroom?

Nicole: … I wouldn't say the academic grade itself is successful, I would say it's if I know I did my hardest I could for the class and didn't just put in minimum effort… I still view the grade as part of it but I wouldn't say it is the overall…

BK: Would you say your definition of success is the same regardless of the content area? Or would you say success in PE is different than success in math…

Nicole: I would say for all the core classes it is probably the same, but for other classes like that it is different…

BK: … Do you view understanding the content as part of success?

Nicole: Yeah.

BK: Where would you say that that kind of fits into your… definition of success?

Nicole: … (If) I don't understand it at all, then I'm clearly not succeeding because I'm not putting in effort to try to understand it and I'm just not really paying attention, so I feel like if you don't understand it at all then you're just kind of stuck…

BK: … Can you give an example of a time that you succeeded?

Nicole: … Probably going back to freshman year on our job interviews or speeches that we had to give at the very end just 'cuz I was really nervous for all those. Public speaking scares me so giving speeches is probably something I was proud of.

BK: … Can you give an example of a math classroom setting that you would say that you succeeded?

Nicole: (The Desmos project)… that was hard for me, but I actually made it look like something at the end… A house on a hill with a flower and the sun.

BK: … You would say your Desmos project was success… because it came together?

Nicole: Yes, because I actually did not know what I was doing in the beginning, but I figured it out…

BK: On the other side… can you give an example of a time that you didn't succeed?...

Nicole: Definitely any of my math tests... I always knew how to do it, but when it actually came to the test and didn't have my notes in front of me to like work me through the problem... I feel like I didn't do my best on the tests because I could have spent more time like studying it… instead of just doing the review packets…

BK: … Who influences your definition of success…?

Nicole: My parents because they just want me to do the best… they're always like "We're going to be proud of you no matter what, just try your hardest on it."…

BK: … Would you say that your peers have any influence in your views of success?

Nicole: Yes and no, because I feel like they also put in bare minimum sometimes, like if we're in the same class or something they will still put in a bare minimum effort but still get a higher grade than me… I wouldn't really say that peers influence my definition a ton…

BK: You gave the example… of them getting a better grade… How does that impact the amount of effort that you put in or that you want to put in to succeed?...

Nicole: I would say it's more of a just me thing because everyone learns differently… and some people are better at guessing and getting stuff right than I am…

BK: … Do you care what grades other people get?

Nicole: … My friends. I don't want to hang around with people that don't try, but if someone in my class isn't really getting a good grade, it doesn't really affect me.

BK: … If everybody in the class knew what your grade was, would that change what you do?...

Nicole: … Probably motivate me to try a little harder because I don't want to be embarrassed by my grade, but if I'm not the only person in the class with like a not great grade, I feel like it wouldn't bother me at ton… (If) it's just like a bunch of people I don't even know… I wouldn't really care.

BK: … For my understanding… can you explain more of what is a good grade?

Nicole: … Well, in like other classes, I would say I like to get an A or at least a B on tests. Math is (a) different level because I just don't understand it. So, if I got a C, I didn't love it, but I settled with it just because it wasn't a failing grade… I want to end with a 1, that's obviously my goal… And if it's like an easy class like I'm in marketing right now, if I end with a 2 in that class, I'm going to be disappointed in myself… When I was in AP psychology I ended with a low 2, I think, and like that was fine with me just because it was a harder class.

BK: … How much of that would you say comes from an internal desire and how much of that would you say comes from external pressures (and) factors?

Nicole: I feel like most of it is internal, just because like I want to succeed… Obviously, I want to get good grades for college… I want the best for myself, so I feel like the majority of it is internal…

BK: … You discussed a little bit about how math makes it a little bit different, but would you say that other than math, that there are other content areas that your definition of success is different?

Nicole: Yes and no… English right now… just finishing a book was accomplishing for me because I don't read and I finished two books within a month… I don't think it's as hard for me to define success for the other ones just because, I don't know, I find it easier to write stuff like essays and stuff… it just comes easier to me.

BK: … In different classroom settings for different classroom types, like for math we have we were blended. Would you say that that blended environment changed your view of success or the fact that it was math kept it as math?

Nicole: I feel like it changed it a little bit because I had to keep myself responsible for the days that we weren't in class… If I didn't watch video or if I watched it late or whatever, I feel like that put me behind. So, I guess blended would change it a little bit just because I'm more responsible for myself and keeping up with it, other than just being in class and getting taught the notes and stuff.

BK: … It goes back to the fact that the effort is more on you… If college were to allow you to sign up for an online class or blended class, would you pick that again?

Nicole: Depending on the subject. I feel like math, I definitely need to be in class just because I always have questions and I just learn better when I am able to see them… though you made videos it was sometimes hard to stay focused…

BK: … So, let's give the hypothetical question… (If) the world of education says we're done giving grades… Would that change your view of success?

Nicole: … I feel like it would kind of change it because I know I would catch myself not putting in as much effort for that if I just had to meet a bare minimum… The definition wouldn't change but I definitely wouldn't try my best…

BK: … Is there anything else that you would like to add or share about your views and definition of academic success? … All right, so thank you for your time.

Interview #7 (Raven)

BK: … I am interested in learning more about how academic success is defined and measured, especially by students themselves. As an educator, I understand that success is viewed differently by various groups of people like students, teachers, administrators, et cetera. and I am wanting to understand more from the perspectives of students in the mathematics classroom…. How would you describe yourself as a student?

Raven: I would definitely describe myself as a hands-on learner… When it's visual or just notetaking, it's much more difficult for me to comprehend what we're going over.

BK: … Are there certain subjects or content areas that you would say you seem to do better in based on that style of learning?

Raven: … Science… (In) zoology, when we would dissect animals, I would do really well on like the tests or quizzes we had because it was so just hands-on…

BK: … In math class, how would you describe yourself as a student?

Raven: When I first started high school, I would definitely say not the best, but as I pushed myself… I am probably an average mathematics student.

BK: … What are some of the things that you have done to 'push yourself'?

Raven: … Making my mom and dad proud of me was a big reasoning I wanted to push myself and get good grades in school. And it was also for me just to feel that I didn't just push myself – I went beyond what I thought I could do.

BK: … How much time would you say you spend outside of class on homework, on studying and different things like that?

Raven: When I get home from school, I usually do homework and that lasts maybe half an hour to an hour. And then studying… if it's a small packet, I'll study the packet for like an hour, take a half hour break study it again. And if it's like words, I'll study, take a break and ask my parents or brother to ask me a question or words.

BK: … How would you personally define success in the classroom?

Raven: Success in the classroom for me would definitely be not something to just please other people, which most people I think would want to do that whereas for me it's not just pleasing myself, but pushing myself beyond what I thought I could please myself with. So, making myself more proud and more pleased with the work I have laid out in front of me by pushing beyond success.

BK: … What are different things that kind of impact where you set that bar?

Raven: Different things would be like what class it is. So, for example, if it was zoology, I would push myself to get an average one, so like a 95 percent. But if I could reach that goal quicker than I thought, I would definitely try to push beyond that and get like 100 and whatever percent or just 100 percent.

BK: … In a math classroom, where would you say you normally put that bar?

Raven: Three… I used to put it on four just because I never really thought I could get beyond that, but especially my last math class of junior year I had ended it with a three… senior year… I want to set the bar higher than what I think I can do. So, I set it on the three and it was just really pleasing and I was really happy when I would get three or a good grade.

BK: … Can you give an example of a time that in any classroom setting that you would say you succeeded?

Raven: … I had a Law Studies class… and we had taken our first test when we finally came back to school and I didn't do too hot on it. And it had dramatically dropped my grade… so, I worked really hard to get to a one again, and I finally did… that's where I wanted it… I set the bar at a one and when that test came, dropped it to a four so I just worked really hard to get to that one… I pushed beyond it and I got like a hundred and like four percent in the class.

BK: Now, in terms of looking at the math classroom setting… what would you say are factors that helped you kind of move from a four to a three?...

Raven: I would definitely say wanting just to feel better… I wanted to feel like I had put everything I could out… see how far I can go by pushing myself… to the limit to see what I could come up with.

BK: … On the other hand… can you give an example in which you didn't succeed?

Raven: … Sophomore physics class… didn't do well… the teacher that was supposed to teach left, and so they brought in another one who had no idea what they were doing. And then it wasn't like we really did anything in that class… He wasn't prepared to be the teacher.

BK: … Is there anything that you can think of in a math setting that you would say I did not succeed on blank?

Raven: Geometry. I'm not good with shapes – it's as simple as that.

BK: … Do you think having more hands-on of shapes… would have helped you succeed in geometry?

Raven: I feel like it would have definitely helped… understand it better… I feel like when they're talking about it and they just draw the shape out, it's like, "Yeah, that's a great octagon. But why is it? Why is this and why are we doing this?" And if it was in front of us, like maybe like different pieces to make it, we could see why certain things it does.

BK: … In terms of looking at your definition of academic success and success in the classroom, who or what influences your definition? …

Raven: Definitely my mom… She knows when I give it my best and she knows that, you know, sure, this is your grade now, but what would happen if you just pushed yourself in the class a little harder? And then also my brother… I look at him as like a huge role model for me… I want to be like that someday… In high school I would say he was a pretty average high school student. But one thing that I look at is because when he went into college… he got to wear another thing.

BK: … He was recognized for his achievement… You saw how he pushed himself to continue to improve and that's part of why he is… a role model for you.

Raven: Yeah.

BK: … Does your definition of academic success change in different classroom settings? …

Raven: It's different in the sense not drastically, but if I know I perform better in different classes, I'm most likely going to set that bar even higher for myself so that I can achieve beyond what I know I already can.

BK: … (If there was) an in class offering, an online offering, or a hybrid – if you had all three options, which of those options would you pick and why?

Raven: … In-person classroom because, sure we learned online for a little while, but learning online… wasn't as fun and… I don't feel like I was fully… drawn into the lesson. There were so many distractions around me… So, just being in a classroom setting, it gives me the learning thought and process that I actually need instead of being distracted throughout learning… definitely in person.

BK: … Say you were, for some reason, forced to take an online class… it's only offered online… do you think that it would affect kind of how and where you set your bar to challenge yourself to succeed?

Raven: I would say it does, because I know that – well if I honestly had to take that class I would still set that bar to whatever I think I can get and still push beyond that. But I would also try to drown out any distractions around me so that I can get what I need to get done.

BK: … I guess we'll end with one other hypothetical question just to kind of think about things… If grades weren't a thing… do you think that that would affect where you set the bar for yourself?

Raven: No, because for me, I'm a competitive person… but I'm not just competitive with other people or friends, I'm competitive with myself… I always just try to push myself… so that it's not just the same feeling of… get the work done and get the grade… Let's do better than my past self did.

BK: … Is there anything else that you would like to add or share about your views and thoughts and definitions of academic success?… Thank you for your time.

Interview #8 (Ralph)

BK: … I'm interested in learning more about how academic success is defined and measured, especially by students themselves. As an educator, I understand that success is viewed differently by various groups of people like students, teachers, administrators, et cetera and I am wanting to understand more from the perspectives of students in the mathematics classrooms. So, my first question for you is, how would you describe yourself as a student?

Ralph: … A pretty engaged student. I try to answer any questions, ask a lot of questions, always participate in any group discussions or projects… All the time trying to better myself as a learner and help the teacher as much as possible.

BK: …If I were to say as a math student, would you say that your description changes?

Ralph: Not really… I definitely struggle in math more than other subjects… it's not something that comes as easy to me as a science or history class, but I still try to help out and ask questions and then I actually ask more questions in math to make sure that I understand it. That's more when I struggle with a subject.

BK: … How much time would you say you spend outside of class on homework and studying – things like that?

Ralph: Depends on the homework, but it's usually an hour, hour and a half… Studying is a little bit less because for some reason, just studying never helps me. It's like my brain just doesn't comprehend when I'm like just reading or doing notecards… so much information all at once… Practice test(s)… help more than anything else…

BK: And would you say that some subjects are more or less than others?

Ralph: For sure. Science takes me less time, but then math I spend more time on it to make sure I can reinforce that knowledge and make sure it sticks with me…

BK: … Are there any things in your life that you would say either kind of help or hinder the amount of time that you spend?

Ralph: … Now that I work, I usually am scheduled three days in a row during the week… that sort of blocks off all of my homework time… And helping me would be like anything practice test-wise that the teachers give or study guides are helpful things to do for studying and stuff like that knowledge and information retention.

BK: … How do you define success in the classroom?

Ralph: … Honestly, it's just learning. For me is as long as I'm learning something, learning something new… progressing basically, instead of just sort of staying the same sort of that level of success… I'm not one of the students that has to get in "A" in every class…. But as long as I'm learning and getting gaining new knowledge and getting some good test grades… that's kind of my views of success.

BK: ... Can you give an example of a time that you succeeded in that setting?

Ralph: … AP environmental science class, I got like ninety something in the class, which I was really happy with myself for… It regressed to a B in the second semester, but I was happy. It was my first – it was my only A.P. class in high school and I was happy with myself… because it's a harder class.

BK: … In a math classroom setting, can you think of a time that you succeeded?

Ralph: … (In College Algebra) second semester I had pulled my grade from nearly failing, I had gotten it to a "C"… It was just those last few topics were not easy for me, but I was able to reel it back in and get it to the "C" and I believe it was a B or A either a close B or A in the first semester.

BK: … To what extent do you feel that the grade factors into how you view success?

Ralph: … It probably wasn't the thing I listed first, but I guess thinking about it more it is like the main thing. It's what teachers look at the most, it's what my parents look at the most… It's not 'What have you learned?' It's sort of like 'How your grades doing?'… Since I was a little kid, like make sure my grades are good or else something is taken away or a punishment is there.

BK: … Do you agree with the grade being held in such high esteem?

Ralph: … The way that tests are structured, where you have very little to no assistance that anymore that doesn't happen because there's constantly a piece of technology at our side… There's almost always a way that you can find the information that is needed… I've always thought technology has really broadened the way that we get our information. And so it's sort of the old ways of test-taking… like being phased out basically because the whole retention is not as – is not as necessary in a way for when we have those things at our reach, and everything that we can use.

BK: … Can you give an example of a math class and/or a different type of classroom setting that you would say that you didn't succeed?

Ralph: For math… I was just struggling with the information and trying to remember from my notes and put it on that homework… it was a struggle… In digital design class, I was not very good at it… I just struggled for some reason really bad… but I did end up bringing that grade up as well…

BK: Who or what… influences your definition of success in general?...

Ralph: … Grades have been ingrained in your mind as a little kid… parents and teachers always talking about grades… For some people, the traditional ways of doing tests and stuff like that just doesn't work… but definitely grades is the big, big thing from parents, teachers, everybody… Colleges look at your grades and ACT scores and measure how smart you are based on grades, even though some people have smarts outside of the classroom, just they can't convey it to pen-and-paper.

BK: … Hypothetical question – if we did away with the grade system.

Ralph: ... How would you get comprehension and keep that?... Maybe not taking it away completely, but modifying it a little bit in a way.

BK: If I go from one class to a different one, like music or PE… does your definition of success change in those different settings?

Ralph: … Choir is more of an ensemble, how the ensemble sounds… not as much (of) a grade factor… In a math class, I'm trying way harder to keep those grades up because it's something I struggle in… I love biology and earth sciences so I'm trying to gain new knowledge… I want to pursue (zoology) as a possible career, so I'm trying to learn as much as I can to keep that knowledge…

BK: … You've discussed math as being a class that you struggle in more… What caused you to pick the blended version of our class instead of the traditional…?

Ralph: … It was a lot of medical reasons… I actually really enjoyed the videos and I thought that that was good for me because I could do it at my own pace… (When) we were in class, I felt notes took forever… because people didn't understand it. And the videos also helped me because I could go back and if I could watch how you did the equation multiple times and the formula and figure that stuff out that way… If I had a question, I could drop by any time during class, so it really sort of had a good balance between being in class and being outside of class…

BK: Would you say that the blended/hybrid method of delivery, instruction of the class – do you think that that changed your views or definition of success for that class?

Ralph: I say it did a little bit. It was sort of like if I made sure that I got my work done and I was doing good on it… I got it done without being too distracted and I was able to comprehend everything and make sure that I got it done… As long as test grades and scores and stuff kept up with that then yeah, it was success.

BK: … If you were to have the choice between an in-person class, an online class, or even a blended/hybrid version… which would you say it best supports you?

Ralph: … Either one of those blended versions or even a completely online because… I feel like a lot of times I'm hindered by my classmates… Everybody has a different way that they learn and a different speed that they learn it, so some people learn faster and can see something and understand it quicker than maybe somebody else. It may hinder their ability to learn in their ability to get work done more efficiently… (With blended) you can still ask questions in-class or go in during whatever that class hour and get extra help if you need it…

BK: So, the main thing that you like is controlling the pace.

Ralph: Yeah, it's – 100 percent…. I try to not only make sure that I'm understanding it but make sure I'm not hindering anybody else's learning because I know how that feels… The blended is probably the best option to have that option of having the one-on-one or the class discussions with the teacher, but also being able to on those off-days go at your own pace…

BK: … Is there anything else that you would like to share and/or add…?

Ralph: … As long as I'm happy with what I'm doing, as long as I'm not too stressed out about it or if I'm not freaking out about something, I feel like I have succeeded. If I am content with whatever grade or the amount of work I've done on a project or how something or a finished product… my measure of success is how content and happy I am with whatever I just completed.

BK: … Thank you for your time.

Interview #9 (MJ)

The recording of this interview did not save – therefore there is no transcript of this interview, only these field notes that were written down during the interview.

Interview #10 (Sally)

BK: … I am interested in learning more about how academic success is defined and measured, especially by students themselves. As an educator, I understand that success is viewed differently by various groups of people like students, teachers, administrators, etc. and I am wanting to understand more from the perspectives of students in the mathematics classrooms. So, my first question to you is, how would you describe yourself as a student?

Sally: … I would say I'm a visual learner and I'm really easygoing, like I can work well with students and classmates around me… (I) apply myself and actually… look at the material in order to get an understanding of it. I can't just go into the test...

BK: … I know that sometimes people are like I am or am not a math person. Where would you put yourself in terms of math?

Sally: I would say I am a math person because I like learning the material, like I've always liked math more than like an English class. Because I like being able to go back and solve… graph the answer I just solved.

BK: … How much time would you say you spend outside of class on homework, studying, etc?

Sally: I would say it depends every day… probably 30 minutes each day at least. Unless I procrastinate and then I'd say a couple hours.

BK: … Are there other things that impact the amount of time…?

Sally: I would say the material I'm studying. If I don't really understand it, I have to put more time in... 45 minutes studying rather than just 15…

BK: … Are there things in your life that cause you to not have time to study?

Sally: Yeah, I would say like my outside life… like working… and sometimes I just don't have the motivation to study.

BK: What are things that motivate you to study?

Sally: Getting good grades… my parents motivate me because I know they want me to do well, so I want to live up to their expectation…

BK: … how do you personally define success in the classroom?

Sally: … I would say it means like understanding the material while getting a good grade on it… fully comprehending what you are learning - not just like getting a good grade and having no idea what you're doing.

BK: … You say that both of them need to be present… understanding and the grade?

Sally: … I would say more understanding…because school is more than just the grade…

BK: … Can you give an example of a time that you succeeded in any classroom setting?

Sally: … Stats – because there were sometimes I was like really successful… got good grades on some tests, but others I wouldn't… I still understood the material… and I think this is a good one because you had so much material you had to learn and like understand how to do it. But it wasn't always with me with how to apply it…

BK: Can you think of anything that is a non-math example of success?

Sally: … Yearbook... Because you need, like all the skills to know how to write a story and have good people talking skills when you interview and all that, but you still have to, like, apply that to the yearbook…

BK: Can you give an example… of a time that you didn't succeed?

Sally: … We (were) reading Great Gatsby and it was so hard… I felt I just read every page and had no idea what was going on… I could see that on my grade… those tests I wouldn't score as high as a book I would understand… And I feel like in English class I never can fully apply myself… I can't succeed to my highest…

BK: … Are there influences… that help shape your views and definitions (of success)?

Sally: … I would say my dad shapes me with… attitude and mindset because he's always told us two things you can control… your effort and attitude… I feel like that goes a long way with success… you have to feel good about it… know the concept you're learning… understand it and then you'll start seeing like progress.

BK: … Is there anything that kind of helps put grades in your view of success?

Sally: … Holding myself accountable. My parents, too, though I've never been a student that gets three's or four's... they… (make) sure that I'm staying on top of it.

BK: … Hypothetical question, and it's a big question, if we did away with grades, would that change your views of success? And if so, how?

Sally: … In order to succeed, you need to know what you're doing, (and be) confident… (If) you can see yourself making progress from when you started, that's still successful to me. So… yes and no. Yes, because… you don't have that… check mark, you can check off… No, because… you still know what you're doing.

BK: Would you say that your definition and views of success change in different classroom settings – like different content areas?…

Sally: I would say slightly different with how understanding is used.

BK: ... in a PE class or an art class… how does success get framed in those settings?

Sally: … It goes back to like the attitude and effort… you succeed in gym class if you're putting your all on it… you can't be graded or whatever, based off of your athletic ability, so as long as you're putting in what you need to do, that's successful to me.

BK: … To what extent do you feel the attitude and effort play into it (academic success)?... To what extent does understanding impact attitude and effort…?

Sally: … What you put in is what you're going to get out. So, how hard you try with that test… your grades are going to reflect like how well you know the material… in order to know the material, you have to put an effort… and time.

BK: … Another hypothetical… You're in a class, and it's the easiest class you've ever taken… you understand the material perfectly fine... but you have very little effort… Because everything's coming so easy to you, you get a good grade even though… minimal effort or maybe no effort, does that still count of success?

Sally: No… it's not success because you didn't put in what you could. You just happened to get lucky and happened to know the material really well.

BK: … Say I'm in the hardest class that I've ever taken… You're putting forth so much effort… coming in before and after school… you're trying to (understand)… (but) it never 'clicks'… so I get a C… Does that count as not a success?

Sally: No… like grades aren't your mile marker to be successful…

BK: … to some extent, it really does go beyond the grade.

Sally: Yeah, for sure.

BK: … Knowing you as a learner, knowing your views of success… what made you want to take a blended class?

Sally: … It's like a start for college… I have to still learn so much material in school, but on my own. I still have to hold myself accountable and make sure I'm not slacking off… over time that's going to show.

BK: … Would you say that your views and definition of success would be different?...

Sally: … I don't know, I'd say as long as you're staying, like proactive and productive… then you're successful… Sometimes those classes are harder for students to learn when they're all online or blended, so I feel like as long as you're putting forth your time and your effort…

BK: … Knowing yourself as a learner, do you think… when you're given the opportunity to take an online class, do you think you will?

Sally: I think it depends on the class. If it's like a gen-ed, yes. But if it's like math or like history or English, no, because I… apply myself more in person… I slack off way more online.

BK: So last spring was fun?

Sally: … I got away with everything because I was just lazy, like I just did what I need to do… I just wait until the last day… and that's just not good.

BK: Would you say that you're succeeding in those classes?

Sally: Yeah, because… when I do do it, I still put in all my effort, it just is in a more stressed way.

BK: … Correct me if I'm wrong. I feel like with how the questions have progressed, that you're saying effort is the main….

Sally: Yeah.

BK: … Is there anything else that you would like to share about your views and definitions of success?

Sally: No.

BK: … Thank you for your time.

Interview #11 (Annie)

BK: … I am interested in learning more about how academic success is defined and measured, especially by students themselves. As an educator, I understand that success is viewed differently by various groups of people like students, teachers, administrators, et cetera. And I am wanting to understand more from the perspectives of students in the mathematics classroom… How would you describe yourself as a student?

Annie: I would describe myself as a motivated and hardworking student, and I keep my grades above three's all times. And I'm always putting in extra effort to get things done… coming in before and after school and studying a lot, asking questions.

BK: … Would you say that you would describe yourself any differently as a math student or in the math classroom, or is it pretty much the same?

Annie: … Math is… trickier for me… More of an asking questions student, more curious type of student when I'm in math, because I'm always learning something new.

BK: … I know some people would describe themselves as… a 'math person'… Where would you kind of place yourself?

Annie: I'm definitely in the middle because I struggle… I like to have… hard work and… then when you figure it out, it feels really good. So, once I figure out… then I like math a lot and I'm getting the correct answers and it's all making sense.

BK: … How much time would you say you spend outside of class on homework, studying, et cetera?

Annie: … I think I spend probably like an hour to two hours, like not that long, because I remember stuff really fast and I kind of have a photographic memory. So, when I look at something, I can remember it really fast. So not that many hours.

BK: And are there are there various factors that kind of impact that either increase or decrease the amount of time that you spend?

Annie: Life… my dogs are puppies, and my sister needs rides… and I work...

BK: … How do you define success in the classroom/academic success?

Annie: I define academic success by… when you work hard… and you get good grades because when you work hard and you can see the progress that you're getting… And I think keeping my GPA above three point five has been the most successful thing I've done because school's hard and it's hard to keep things on track.

BK: … Can you give an example of a time that you succeeded in any classroom setting?

Annie: … My first precalc test… I studied for like a week straight for this test and I got probably like in ninety nine and that's like really high for me… I studied with my dad and I even got myself like a tutor…

BK: And can you think of an example in a non-math setting?

Annie: In Spanish I did like this whole project, and it was it had to be all in Spanish and I got 100 percent on that because I went over it like 50 times a day over and over…

BK: … can you give an example in which you didn't succeed?

Annie: … Sociology test… I think it's more of an easy class with a teacher that's more like easier to be comfortable around because I've had him for a few years and I (took) that for granted and I kind of (slacked) on learning and like paying attention… When it comes to testing, I'm always like kind of frozen and kind of have to wing it…

BK: … In the world of math, can you give an example of a time that you could say you didn't succeed?

Annie: Probably in your class when I cheated for no reason, I took out my stress on that and I just decided to do that… I've never cheated in my life and I was like, that was a bad moment for me. And that was really unsuccessful in my opinion.

BK: … Do you view working hard and making progress as two separate things, or do you think that they're completely connected?

Annie: I think they are two separate things… I tend to work hard to actually see progress occurring and if you don't work hard, then you won't see any progress… I think that one leads to the next… Academic success would (also) be like seeing my parents proud…

BK: What would you say makes your parents proud?

Annie: When I have all ones or like getting good grades for like a long period of time.

BK: … In terms of working hard, good grades, is there one that you would say is… more important in terms of your view of success?

Annie: I think working hard is really one of the main things… because you're doing something that you're making a commitment to and I think that you should be able to fulfill that commitment … I think working hard is really important…

BK: … Let's give a hypothetical question… You're working hard but the grade's not there – is that success?

Annie: … Obviously not… You might be working hard, but are you really putting in the effort and paying attention? Because usually there should be some improvement if you're working hard and doing better no matter what you're doing and I think if your grades not changing then you're not putting in enough effort…

BK: … Say you're in an easy class… You're getting a good grade, but you're not putting in much, if any, work – is that success?

Annie: … I think if you're putting in hard work, then that's success, but if not, then you're just you're just kind of riding the wave and slacking a little bit… It doesn't really fulfill you in the end, knowing that you did good because you just slacked the whole time… you didn't challenge yourself, and I think challenging yourself is part of the whole working hard… even if you're getting 100 percent.

BK: … Who or what would you say influences or shapes your definition of success in the classroom?

Annie: … My dad has worked really hard… he put effort in and went to school and put himself through college… and challenging himself… (When) teachers like bond with the student really affects how a kid is going to work hard or have success in the classroom, because if your teacher doesn't seem like they're wanting success for you, then why would you want to have it too?

BK: … Your view of including grades as part of the measure of success…

Annie: Yeah, I think if you have one and you worked hard for it, then that is successful on your part, and I think if you have a two… putting in the most effort you can, then I think that's still kind of a success… In PreCalc, I'm working really hard, but it's still hard… I'm trying my best and I'm working hard… I am happy with how I'm doing and my grade right now because I think I'm putting as much work as I can with the time I have and high school is not always easy…

BK: Would you say your views/definition of success change in different settings?…

Annie: Yeah, I definitely think that especially like going from math class, like gym class, I think gym class is different because it's a physical activity and like you put the most effort you can… I just think it's different, but it's the same… you get what you put in to it basically is what I'm saying …

BK: … You mentioned school versus out of school being different, can you elaborate on that a little bit?

Annie: … In school, I think you have… certain standards to meet and like how hard you work and what you put into and like your grades… But out of school, it's all on you… your choice whether you want to work hard or not. But I think in school it's different because it has a… role on your future…

BK: … Hypothetical question… if we did away with grades… how would you view success or how would you… measure success without that metric…?

Annie: … I think it would be a good change because then you wouldn't have to keep looking and know that you're failing and then it makes you… lose energy to work harder. And I think that if there were, like, no grades, then you could push yourself to how far you need to go… You're making the progress and you're figuring out how much progress you're making instead of looking at a grade book and knowing like, oh, you're failing because I think a lot of times kids lose a lot of hope when they see their failing class and they're like scared to ask for help or anything…

BK: … Is there anything else that you would like to add or share about your views and definitions on academic success?

Annie: … I think success is… personally like seeing results in myself, not on like a grade book… actually like being able to write something down and do a problem real fast like that gives me that, like rush of like "Yes, like I did this." So, I think that's I think that's more of my definition now…

BK: All right, well, thank you for your time.

Small Group Discussion #1 (Becky, Mike, Sally, Joe, Victoria)

BK: … Thank you for taking the time to participate in a follow up small group discussion, as you all know, the purpose of this research is to better understand how students define academic success. I have some follow up questions that have arisen from observations of the classroom environment and the original interview responses. I would love your insight to help clarify and increase understanding of this information, to help better compare and contrast the definitions of success. Please know that though there are full intentions to maintain the confidentiality of everything that is said and done within this research project, I cannot guarantee that everything discussed today will be held confidential due to the nature of the small group discussion. It is highly encouraged for all participants to not share what is discussed within the small group discussion to help maintain and preserve confidentiality.… It might be slightly different than what you said in the individual interview, but let's just kind of go around and just kind of briefly say, how would you define (academic) success…

Joe: I would say it is knowing and fully learning the material….

Mike: … Understanding the concept and then possibly like applying it to other things…

Sally: I would say knowing the concept of what you're learning and not just saying you know it and giving your full effort.

Victoria: … Understanding the material – also being happy with where you're at and what your grade is.

Becky: I would say passing – getting a 1.

BK: … If I'm missing something, let me know, but things that I'm seeing is we have understanding… applying it… effort… happiness or contentment… and grades… Ranking them is going to be very difficult… but out of these five things, what is one or two that you would say is really important and maybe one that you're saying is not as important, at least for you personally? …

Becky: The grade – getting a 1… getting high scores on tests… knowing the information until I don't have to anymore… it's all for the grade…

BK: And would you say that there is one of these (five), that you would say for you really means little to nothing in how you view success?

Becky: … I think I want them all, but if I get really good grades, but I still don't understand… I'm fine… I think contentment goes kind of with grades for me, because I would be happy with a 1 – I would not be happy with a 2.

Victoria: … Contentment and grades are probably my most viewed… my grades shows my understanding of the subject… I get my homework done if I understand what I'm learning. I get good grades on tests if I understand when I'm learning.

Sally: … I would say understanding and I would say the effort too because the amount of effort you put in is going to show… If you put effort in, then you're going to be content… Grades are important too, but they're all important to me.

Mike: I'd say effort and grades for me…

Joe: I'd say understanding it would be probably most important with grades and then I would say that being happy and content with your grades to me isn't important…

BK: … It's not surprising that there are some similarities and some differences in terms of how we view those five things… How do peer's parents, teachers, et cetera – a how do outside forces impact your view of success?...

Sally: I would say my parents… they have expectations for me… When I don't meet those, I'm going to feel disappointed and they're going to feel disappointed… Even my classmates… it's a competition… I don't want to be the only kid in the class who gets a 70 on the test…

Becky: … I think that's like not so much the parents thing. I don't think they really care that much… I would say comparing myself to other people is my biggest outside influence…

Victoria: … I think part of it can also be if you have older siblings… Trying to do better because you're trying to prove yourself to your parents… You want to seem smart or… be with one of the highest grades in the class.

Mike: … Personally, it's not more of my parents or an outside factor… Like my parents care about my grades, but I would say I care about them more… put as much time and work in as possible so I can feel that I do my best.

Joe: I think teachers could have an impact too… If you have a really bad teacher and you don't want to put any effort into their class or something, or you have a really good teacher and you actually put extra effort in.

Becky: … If I have a teacher I really like, but I do not understand their subject – I feel so bad… It's not your fault… I don't want that to look bad on them…

BK: … To what extent do you feel like teachers are responsible for the grades of their students earning?

Victoria: … Some teachers… if they see that their kid is struggling, they will reach out… In that case… they're taking responsibility and helping their student versus a teacher who isn't reaching out, sees their kids struggling and not helping.

Mike: … I think it's also 50-50… You can go in and talk to them before or after school, but… the teacher has to do their job and teach you the right material…

Becky: I don't necessarily think it's the teacher's job to reach out all the time, but I think you need to… tell your students you can come in this time… Some teachers… I feel like they make you kind of feel guilty for needing to come in and maybe help… But definitely 50-50… you can have as many 'office hours' as you want, but if they don't show up it's not the teacher's fault.

BK: … Do we agree with the pedestal that grades have been put on in our society?

Sally: I think yes and no, there's always been that, like grading system that you've had to follow. But I also feel just like not even in school, that everything's such like (comparing) now… you want to one up the person next to you… That's when it… gets taken a step too far. But grades (have always been) important to me.

Becky: … In a perfect world, grades like nobody would care about that, and it would all be about just like understanding and really knowing and applying the material…

Victoria: … Schools are so focused on, like how well we do… because it reflects on the school. It brings our status up or down, whether we get good ACT scores or if we fail classes and can't graduate. And it's just drilled into our heads… you need to have good grades, otherwise you can't go to college.

Becky: … And even yesterday, like the thirty-two and above club… Obviously, that's not me, but I don't know just adds to the comparison factor, I think.

Mike: Even with the ACT scores and comparing it to grades like you can so you can get a 20 on your act, but you can go throughout school year and get (a good GPA)… I think it's still a good accomplishment.

Sally: I also don't think one test should determine your success.

Becky: Yeah, or like what ability of education you are allowed to go to…

BK: … Speaking of which… I've heard that colleges this year are (not), or less of them are, looking at the ACT… What do we think about that? Do we like that?

Mike: I personally do… (If) you're not a good test taker, you just flunk the ACT… But if they could leave it as optional… if you don't want to put it, you don't have to put it. And then they can look at your GPA or whatever... I think it would be better.

Sally: I agree, because I'm just like personally not a good test taker…

Becky: … If your parents have enough money, but they're not going to help you (financially) with college…

Victoria: I feel like your GPA show shows more of you as a learner (than the ACT)…

Becky: … I know a lot of people that scored really well on the ACT but don't do anything in school… (They) never show up and never do their work because they just take tests really well… I feel like in college we want the hard worker student who puts work in versus one who did well this one time on this one test.

BK: … OK, so do we think that we will ever go back to the ACT?...

Joe: I think it'll probably stay until it's like replaced with a new test of some sort.

Sally: Yeah.

Mike: Or it'll just stay with some of those big name schools that you have to do good…

Joe: … And it kind of makes sense for those kind of schools. I think you need to be a good test taker and a 4.0 student… if you're going to an Ivy League…

BK: … We talked about kind of comparing competitiveness… So, is a 4.0 GPA always better than a 3.9 GPA?

Sally: I think it depends on… what classes you take.

Becky: … If you know yourself as a student and you know that taking the regular/non-AP/non-honors, is going to be hard enough for you then you're just stereotyped into taking the easy way out, even though that might be a challenge for you already… I think people are so pushed and encouraged, especially in our district… need to take AP… (And) if you don't or you take one, then you should take more because if you don't… then that's going to look bad…

Victoria: Yeah, I feel like that's definitely a huge factor… Normal classes are enough for me and I know what my limits are and what I can do.

BK: … I guess the question based off of that is the balance between effort and challenging yourself… what are your thoughts with regards to how those are related, how those fit together?

Mike: … I put in the most effort I can… I challenge myself, but I don't know… they kind of relate and they kind of don't…

BK: … I want to challenge us all to not reference the grade, though I know sooner or later it will come up… But in a mathematics classroom, how would you say that you know that you understand it? That you get it?

Sally: Your confident.

Joe: I'd say do it being able to do without any, like, assistance.

Becky: I like being able to help others…

Joe: Doing it like in math specifically, I like being able to do it efficiently too.

Mike: … I was going to say grades… but at the same time… you have to be efficient… Your grades aren't going to be like ninety and then seventy and then back to a ninety… I say it has to be like efficient…

BK: Consistency.

Mike: Yeah.

BK: What are things that prevent you from achieving success…?

Sally: I would say your outside schedule… like being too busy.

Becky: Yeah.

Sally: Because then it doesn't give you the time to study and like I'm someone who doesn't like to stay up until 2:00 a.m. doing homework…

Becky: … I agree that definitely except I would definitely stay up until like 4 AM… I would have to stayed up the entire night… Looking back. I'm like, 'Why did I care so much?'...

Mike: … Sometimes dozing off… you're doing your homework assignment and you just stop what you're doing.

Joe: … If you're in a class with, like all your buddies or something, you're probably not going to get as much done…

Becky: And then if you're in a class and you don't know anybody… I'm doing this by myself…

BK: So that brings up an interesting question… In an English class and you're told to partner up for some activity and you know nobody in the class… versus in a math class of like checking an answer with somebody and you don't know anybody…?

Joe: … (In) math, I feel like everyone's on the same page where you're asking for answers and stuff. Everyone's trying to get the same thing and see if they got it right, versus like finding a partner in English, which could just be awkward.

Sally: Yeah, that is so true.

BK: Do we all agree…? … Maybe it's just my perspective… but asking somebody for help in a math class does require some vulnerability.

Becky: Yeah, that's like I'm way more nervous to, like, ask somebody in math what they got compared to my answer… my strengths are in English and reading.

Sally: That's the opposite of me.

Joe: … I think it depends on who you ask because if you ask the smartest kid in the class… you're going to be a little more nervous… (than) if you ask someone who's struggling the same as you.

BK: … Kind of in a related sense… do you think that sometimes causes people to not ask questions and ask for help?

Victoria: ... I feel like for me to like I if I ask for help… and then they explain it to me… I don't want to have to ask them to explain it again… It's so awkward and then I just never learn it because I feel embarrassed to not understand it…

Mike: Yeah, I agree.

Joe: I think it also depends on the person because I'll be annoying and ask four times and just keep telling them I don't get it…

Joe: … When you're asking a teacher and it just kind of seems like you're bothering them… It's kind of tough when you really feel like you're annoying.

Victoria: … I wouldn't be able to do a problem on the homework and then I show up with it not done there… (And the teacher asks) 'why didn't you try?'… I didn't even know where to start… I didn't know where to start and I just need help… (The teacher makes is feel) that not giving the effort when maybe you tried your sat there for like 20 minutes, you didn't know where to start…

Becky: … (The) relationship with your teacher… is going to be huge…

Mike: Yeah, if you build a good relationship with your teacher, at least for me, I feel comfortable coming and asking them questions…

BK: … I want to honor your guys this time… The (last) question is, how do you achieve success? … What does it look like for you… to achieve success? … What is needed to succeed?

Mike: I'd say for me, it's effort… You can't just like study for one test or one day and then just be done with it. You have to keep going to understand all of it…

Victoria: I think understanding comes easier with the amount of effort you put in… especially with math…

Joe: I think also effort in the actual class… Coming to class and giving your attention to what's going on and actually attempting like the math problems…

Becky: … Support… If you have a teacher that genuinely encourages you… I think that you're going to see a higher level of effort and success.

BK: … Anybody have anything else they would like to share?… Thank you for your time.

Small Group Discussion #2 (John, MJ, Raven, Nicole)

The recording of this small group discussion did not save – therefore there is no transcript of this small group discussion, only these field notes that were written down during the discussion.